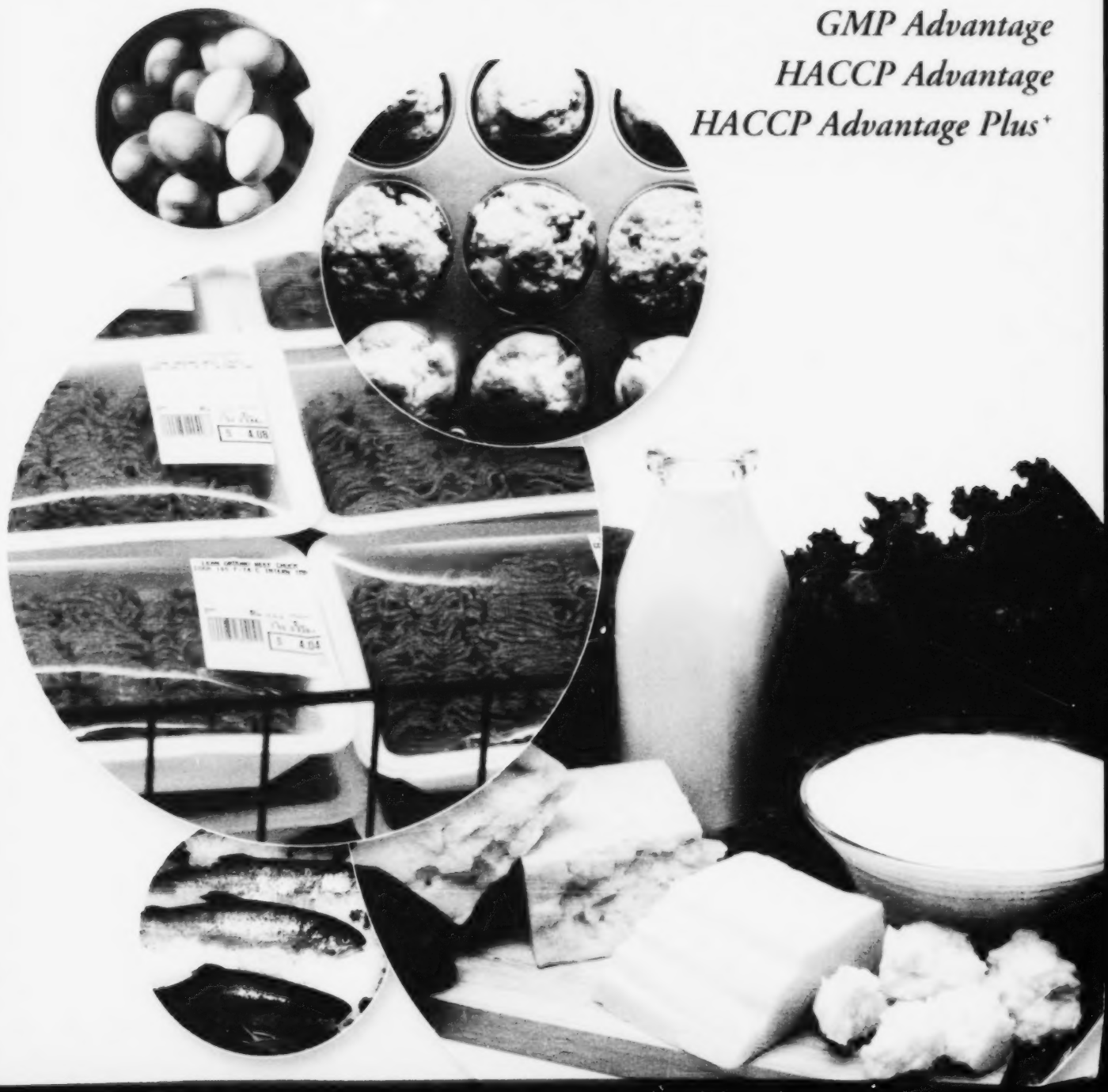
Ontario

HACCP Advantage

Program Manual—Version 2.0

GMP Advantage
HACCP Advantage
HACCP Advantage Plus+



HACCP Advantage | Program Manual

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HACCP Advantage

Version 2.0

Program Manual

Table of Contents

Program Introduction 1

GMP Advantage (Prerequisites)

***GMP Advantage* Introduction** 5

TABLE 1 *GMP Advantage* Standards Summary Chart 8

CONTROL PROGRAMS

P1 Personnel Practices
P1.1 Personnel Practices Program 11

P2 Shipping, Receiving, Handling and Storage
P2.1 Shipping, Receiving, Handling and Storage Program 12

P3 Sanitation
P3.1 Sanitation Program 13

P4 Equipment Maintenance
P4.1 Preventive Maintenance and Calibration Program 14

P5 Pest Control
P5.1 Pest Control Program 15

P6 Recall
P6.1 Recall Program 16

P7 Water Safety
P7.1 Water Treatment Program 17
P7.2 Water Safety Monitoring Program 18

TRAINING

T1 Personnel Practices
T1.1 Personnel Practices Training 21

T2 Shipping, Receiving, Handling and Storage
T2.1 Shipping, Receiving, Handling and Storage Training 22

T3 Sanitation
T3.1 Sanitation Training 23

T4 Equipment Maintenance
T4.1 Preventive Maintenance and Calibration Training 24

T5 Pest Control
T5.1 Pest Control Training 25

T6 Recall
T6.1 Recall Training 26

T7 Water Safety
T7.1 Water Treatment Training 27
T7.2 Water Safety Monitoring Training 28

T8 Critical Control Point
T8.1 Critical Control Point Training 29

T9 Process Technology
T9.1 Equipment and Specialized Process Training 30

Table of Contents

OPERATIONAL CONTROLS

O1 Personnel Practices

O1.1 Personal Hygiene/Practices 33
O1.2 Hand Washing 34
O1.3 Clothing/Footwear/Headwear 35
O1.4 Storage – Clothing/Utensils/Equipment 36
O1.5 Injuries and Wounds 37
O1.6 Evidence of Illness 38
O1.7 Access and Traffic Patterns 39
O1.8 Chemical Use 40
O1.9 Chemicals Used During Operations 41

O2 Shipping, Receiving, Handling and Storage

O2.1 Conveyance Vehicles 42
O2.2 Loading and Unloading Practices 43
O2.3 Received Products 44
O2.4 Shipping Conditions 45
O2.5 Returned and Defective Food Products 46
O2.6 Allergen Control 47
O2.7 Packaging 48
O2.8 Storage Practices 49
O2.9 Chemical Storage 50
O2.10 Waste Management 51

O3 Sanitation

O3.1 Cleaning and Sanitizing 52
O3.2 Pre-operational Assessment 53

O4 Equipment Maintenance

O4.1 Preventive Maintenance and Calibration Monitoring 54

O5 Pest Control

O5.1 Pest Control Monitoring 55

O6 Recall

O6.1 Product Code/Labelling Monitoring 56
O6.2 Mock Recalls 57

O7 Water Safety

O7.1 Water Treatment Monitoring 58
O7.2 Water Safety Monitoring 59

ENVIRONMENTAL CONTROLS

E1 Establishment Location and Construction

E1.1 Property and Surroundings 63
E1.2 Building Exterior 64

E2 Establishment Design

E2.1 Cross-contamination Control 65
E2.2 Personnel Facilities 66

E3 Establishment Interior

E3.1 Internal Structures and Fittings 67

Table of Contents

E3.2 Lighting 68
E3.3 Lighting Fixtures 69
E3.4 Air Quality and Ventilation 70
E3.5 Drainage and Sewage Systems 71

E4 Equipment
E4.1 Equipment Design, Construction and Installation 72
E4.2 Waste Containers and Utensils 73
E4.3 Hand-washing Stations 74

E5 Water Supply
E5.1 Adequate Supply and Protection of Water, Ice and Steam 75

HACCP Advantage

***HACCP Advantage* Introduction** 79
Form #1: Product Description 81
Form #2: Ingredients and Incoming Materials 82
Form #3: Flow Diagram 83
Form #4: Plant Schematic 84
Form #5: Hazard Description and Critical Control Point Determination 85
Form #6: Flow Diagram with Critical Control Points 88
Form #7: Uncontrolled Hazards 89
Form #8: HACCP Matrix 90

HACCP Advantage Plus+

***HACCP Advantage Plus+* Introduction** 93

TABLE 2 *HACCP Advantage Plus+* Standards Summary Chart 94

CONTROL PROGRAMS *Plus+*
P10.1 Traceability Program 97
P11.1 Security Program 98

TRAINING *Plus+*
T10.1 Traceability Training 99
T11.1 Security Training 100

OPERATIONAL CONTROLS *Plus+*
O10.1 Incoming Materials 101
O10.2 In-Process and Outgoing Materials 102
O11.1 Employee Identification and Personnel Control 103
O11.2 Access to Sensitive Areas 104
O11.3 Control of Incoming and Outgoing Shipments 105
O11.4 Inventory Control 106
O11.5 Security Inspections 107

ENVIRONMENTAL CONTROLS *Plus+*
E11.1 Facility Security 108

Glossary 111

HACCP Advantage Program | Introduction

Welcome to the *HACCP Advantage* Program Manual, Version 2.0. The *HACCP Advantage* is based on HACCP (Hazard Analysis and Critical Control Point) principles and was developed by the Ontario Ministry of Agriculture, Food and Rural Affairs. *HACCP Advantage* was designed to be a practical, cost-effective and preventative food safety system for all non-federally registered food processing facilities, regardless of size, commodity or volume processed.

Now, with Version 2.0 of the *HACCP Advantage* series of program, OMAFRA has developed a 3-step approach to food safety management that makes it easier for small and medium-sized food processors to adopt a HACCP food safety program that meets their requirements. These three components – *GMP Advantage, HACCP Advantage* and *HACCP Advantage Plus+* – collectively encompass all the elements of the original *HACCP Advantage* program as well as new elements to meet the evolving needs of modern food safety systems.

GMP Advantage

Good manufacturing practices (GMPs) are the foundation of any effective food safety program. *GMP Advantage* addresses the hazards associated with personnel and the processing environment. In addition to the prerequisite programs contained in the original *HACCP Advantage*, it contains a new Operational Control Standard for "Mock Recalls". The "Shipping, Receiving and Storage" sub-group has also been expanded to include handling.

HACCP Advantage

HACCP Advantage includes the *GMP Advantage* components as well as eight HACCP plan forms. With *HACCP Advantage* you have the tools you need to deal with product and process related hazards that are specific to your facility and products, as well as the hazards related to personnel and the processing environment already controlled by the *GMP Advantage*.

HACCP Advantage Plus+

HACCP Advantage Plus+ includes *GMP Advantage* and *HACCP Advantage* as well as two new program groups to address traceability and security. Protection of the food supply is vital in the current security climate. With this component in place, traceability and security programs are fully documented, an essential step in protecting consumers and your investment should a food safety crisis occur.

While each step increases food safety – and potentially improves marketability for your products – the program you choose or how far you proceed will depend on your market reach, supplier demand and the level of food safety risk in your operation. The Canadian General Standards Board provides certification for each level of the *HACCP Advantage* Programs within Ontario.

Food Safety Regulations

HACCP Advantage programs complement food safety regulations, they do not replace them. Care must be taken to ensure that facilities, processes and procedures comply with provincial and federal food safety regulations.

Resources

It is possible to implement any of the three programs using just the *HACCP Advantage* Program Manual, although some operators may find specialized advice from an outside consultant to be useful. The *HACCP Advantage* Guidebook, produced as a companion to this manual, can help you resolve many common problems. Copies of the Guidebook can be obtained by calling 1-888-466-2372 extension 64752 or by visiting the Ministry's website at www.omafra.gov.on.ca.

A comprehensive food safety management system depends on sound management skills and continual monitoring. It also requires extensive knowledge of the facility into which the program is being implemented, a solid understanding of the principles of food safety and of HACCP as well as an awareness of the hazards associated with the food being produced.

GMP Advantage
(Prerequisite Programs)

5 | *GMP Advantage* Introduction
6 | TABLE 1 Prerequisite Standards Summary Chart

GMP Advantage | Introduction

Welcome to the *GMP Advantage*

GMP Advantage is the first step in the *HACCP Advantage* series of programs. *GMP Advantage* addresses the hazards associated with personnel and the processing environment.

GMP Advantage is divided into four program groups:

- **control programs** – are the written programs that describe how you are going to control food safety hazards;
- **training** – ensure that your employees have the training they need to implement and maintain the control programs;
- **operational controls** - ensure that the written programs are implemented effectively by properly trained personnel; and
- **environmental controls** – ensure that the design and construction of your processing facility create a safe food processing environment.

The page for each standard is organized under the following headings:

- **What is the standard?** – This is the outcome you must achieve in order to meet the standard. You must design and implement an effective program that meets the intent of the standard.
- **Which regulations apply to this standard?** – Some commodity areas are regulated and have additional food safety expectations associated with a given standard. These regulatory references direct your attention to the regulatory requirements.
- **What are the risks?** – This section explains why the standard exists and what hazard(s) it is meant to control.
- **How can you meet the standard?** – This section outlines suggested control measures frequently used in the food processing industry.
- **Are you in conformance?** – This section outlines suggested monitoring procedures you can implement to ensure the standard is being met.

What's New in Version 2.0?

The *GMP Advantage* program replaces the earlier *HACCP Advantage* Prerequisite Programs. This has necessitated several name changes. These name changes are cosmetic only; the actual content of each of the standards is the same and collectively these control the same food safety hazards within your processing facility.

1. The *HACCP Advantage* Prerequisite Programs have been renamed Good Manufacturing Practices or GMPs.
2. Version 1 of the *HACCP Advantage* included a sub-group of standards that were specifically entitled GMPs. This sub-group has been renamed "Personnel Practices".

Apart from the name changes noted above, there are a few new changes to the GMPs. They include:

3. A new standard, O6.2 Mock Recalls, has been added to Operational Controls. This standard requires mock recalls to be scheduled, performed and documented to test the effectiveness of the documented Recall Program (P6.1). Facilities that are currently *HACCP Advantage*-certified will have to add this new standard to their program prior to their next audit.

4. All references to the *Meat Inspection Act* have been replaced with references to the new Meat regulation (O. Reg. 31/05) under the new *Food Safety and Quality Act, 2001*. All non-federally registered abattoirs and free-standing meat plants must meet this regulation.

5. The "Shipping, Receiving and Storage" sub-group has been expanded to include handling as well and is now entitled "Shipping, Receiving, Handling and Storage". These standards ensure that ingredients, food, packaging materials and finished products are always handled in a manner that is safe and prevents contamination.

The *HACCP Advantage* Guidebook will provide you with more specific guidance, along with a number of examples, to help with the implementation of the *GMP Advantage* program.

TABLE 1 | *GMP Advantage* Standards Summary Chart

CONTROL PROGRAMS	TRAINING
P1 Personnel Practices	**T1 Personnel Practices**
P1.1 Personnel Practices Program	T1.1 Personnel Practices Training
P2 Shipping, Receiving, Handling and Storage	**T2 Shipping, Receiving, Handling and Storage**
P2.1 Shipping, Receiving, Handling and Storage Program	T2.1 Shipping, Receiving, Handling and Storage Training
P3 Sanitation	**T3 Sanitation**
P3.1 Sanitation Program	T3.1 Sanitation Training
P4 Equipment Maintenance	**T4 Equipment Maintenance**
P4.1 Preventive Maintenance and Calibration Program	T4.1 Preventive Maintenance and Calibration Training
P5 Pest Control	**T5 Pest Control**
P5.1 Pest Control Program	T5.1 Pest Control Training
P6 Recall	**T6 Recall**
P6.1 Recall Program	T6.1 Recall Training
P7 Water Safety	**T7 Water Safety**
P7.1 Water Treatment Program	T7.1 Water Treatment Training
P7.2 Water Safety Monitoring Program	T7.2 Water Safety Monitoring Training
	T8 Critical Control Point
	T8.1 Critical Control Point Training
	T9 Process Technology
	T9.1 Equipment and Specialized Process Training

TABLE 1 | *GMP Advantage* Standards Summary Chart

OPERATIONAL CONTROLS	ENVIRONMENTAL CONTROLS
01 Personnel Practices	**E1 Establishment Location and Construction**
01.1 Personal Hygiene/Practices	E1.1 Property and Surroundings
01.2 Hand Washing	E1.2 Building Exterior
01.3 Clothing/Footwear/Headwear	**E2 Establishment Design**
01.4 Storage – Clothing/Utensils/Equipment	E2.1 Cross-contamination Control
01.5 Injuries and Wounds	E2.2 Personnel Facilities
01.6 Evidence of Illness	**E3 Establishment Interior**
01.7 Access and Traffic Patterns	E3.1 Internal Structures and Fittings
01.8 Chemical Use	E3.2 Lighting
01.9 Chemicals Used During Operations	E3.3 Lighting Fixtures
02 Shipping, Receiving, Handling and Storage	E3.4 Air Quality and Ventilation
02.1 Conveyance Vehicles	E3.5 Drainage and Sewage Systems
02.2 Loading and Unloading Practices	**E4 Equipment**
02.3 Received Products	E4.1 Equipment Design, Construction and Installation
02.4 Shipping Conditions	E4.2 Waste Containers and Utensils
02.5 Returned and Defective Food Products	E4.3 Hand-washing Stations
02.6 Allergen Control	**E5 Water Supply**
02.7 Packaging	E5.1 Adequate Supply and Protection of Water, Ice, and Steam
02.8 Storage Practices	
02.9 Chemical Storage	
02.10 Waste Management	
03 Sanitation	
03.1 Cleaning and Sanitizing	
03.2 Pre-operational Assessment	
04 Equipment Maintenance	
04.1 Preventive Maintenance and Calibration Monitoring	
05 Pest Control	
05.1 Pest Control Monitoring	
06 Recall	
06.1 Product Code/Labelling Monitoring	
06.2 Mock Recalls	
07 Water Safety	
07.1 Water Treatment Monitoring	
07.2 Water Safety Monitoring	

Control Programs

P1 Personnel Practices
11 P1.1 Personnel Practices Program

P2 Shipping, Receiving, Handling and Storage
12 P2.1 Shipping, Receiving, Handling and Storage Program

P3 Sanitation
13 P3.1 Sanitation Program

P4 Equipment Maintenance
14 P4.1 Preventive Maintenance and Calibration Program

P5 Pest Control
15 P5.1 Pest Control Program

P6 Recall
16 P6.1 Recall Program

P7 Water Safety
17 P7.1 Water Treatment Program
18 P7.2 Water Safety Monitoring Program

P1 Personnel Practices | P1.1 Personnel Practices Program

What is the standard?

A written Personnel Practices Program is developed and updated as required. The program outlines effective food hygiene policies and procedures to protect the safety and suitability of food. At a minimum, the program outlines personnel practices policies and procedures for: personal hygiene practices; hand washing; use and storage of clothing, footwear, headwear, equipment and utensils; health and injury status; proper traffic flows; chemical use; and, where appropriate, identification of allergens and related controls and procedures required to protect the safety and suitability of food.

What are the risks?

Establishment personnel play a major role in the production of safe food. Personnel who do not follow proper personnel practices can cause biological, chemical or physical contamination of food. Developing a Personnel Practices Program can reduce potential hazards and minimize contamination risks.

How can you meet the standard?

- Develop a written program describing establishment policies, procedures and controls regarding:
  - Personnel health status:
    - personnel must advise management when known to be suffering from a disease likely to be transmitted through food,
    - personnel are not permitted to handle exposed food during periods of illness, and
    - injuries and open sores must be secured and protected by a waterproof covering before performing work activities;
  - Personal hygiene practices:
    - proper hand-washing procedures,
    - correct use of clothing and footwear, utensils, and equipment,
    - wearing of jewelry prohibited,
    - no eating or drinking in food handling or storage areas, and
    - no smoking, chewing tobacco, chewing gum or spitting; and
  - Other personnel practices:
    - procedures to follow when product falls on the floor,
    - regulated access and flow through the establishment,
    - glass control and breakage procedures,
    - proper chemical use and storage, and
    - procedures necessary to protect the safety and suitability of food;
- Systems to prevent or minimize contamination of food by physical hazards (e.g. glass, metal shards from machinery) and chemical hazards (e.g. harmful fumes, unwanted chemicals).

Which regulations apply to this standard?

Meat & Poultry:
N/A

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, review the written Personnel Practices Program to ensure that it is current and appropriate for the establishment's operations.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

P2 Shipping, Receiving, Handling and Storage

P2.1 Shipping, Receiving, Handling and Storage Program

What is the standard?

A written Shipping, Receiving, Handling and Storage Program is developed and updated as required. The program outlines effective policies and procedures to protect the safety and suitability of food during shipping, receiving, handling and storage activities. The program outlines roles, responsibilities and instructions for the receipt, shipment, handling and storage of materials.

What are the risks?

Incoming and outgoing materials that are not properly received, stored, handled or shipped can be a source of biological, chemical and physical contaminants. Materials received, stored, handled or shipped in substandard condition (e.g. wrong temperature, wrong product, damaged condition), in a container that is unsuitable or in an improper manner can lead to contamination. By ensuring the proper shipping, receiving, handling and storage of incoming and outgoing materials you can reduce the risk of biological, chemical and physical contamination of food.

How can you meet the standard?

- Develop a written Shipping, Receiving, Handling and Storage Program that sets out policies, procedures and controls for:
  - specifications and inspection criteria (visual, sensory, microbiological testing) for incoming and outgoing food, ingredients and packaging materials (e.g. temperature, condition, certificate of analysis provided);
  - specifications and inspection criteria for incoming and outgoing conveyance vehicles (e.g. structurally sound, clean, pest free, suitable for the intended purpose, temperature controlled);
  - loading, unloading and arranging incoming and outgoing materials;
  - storage procedures and policies for ingredients, finished product and held or suspect product;
  - documentation required to identify materials received or shipped, and prove receiving or shipping criteria are met;
  - procedures for handling and care of food during normal processing activities (e.g. covering food, temperature control); and
  - identification and control of allergens.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.136(1)(2), 138 (1)(2)

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, review the written Shipping, Receiving, Handling and Storage Program to ensure that it is current and appropriate for shipping, handling and receiving activities.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

P3 Sanitation | P3.1 Sanitation Program

What is the standard?

A written Sanitation Program is developed and updated as required. The program outlines effective policies and procedures for sanitation activities that may impact on food safety and suitability. The program outlines the roles, responsibilities and instructions that apply to principles and methods for effective cleaning and sanitizing, safe handling of chemicals, specific inspection and pre-operational assessment activities, plant-specific cleaning instructions and frequencies for equipment, utensils, rooms and outgoing conveyance vehicles, and records to be completed and maintained.

What are the risks?

Food residues and dirt may be a source of contaminants. Improper or inadequate sanitation activities can lead to contamination of food, ingredients, packaging materials and food contact surfaces. Improper chemical concentrations, application or rinsing procedures can lead to both chemical (e.g. chemical residues due to poor rinsing, no-rinse chemicals in excess of approved concentration) and biological contamination (e.g. bacteria not effectively removed from food contact surfaces). Contamination can also be caused by allergens that are not effectively removed from food contact surfaces or by cross-contamination from cleaning activities during operation.

How can you meet the standard?

- Develop an effective written Sanitation Program that sets out:
  - cleaning procedures for equipment, rooms and utensils including:
    - the personnel responsible for particular tasks,
    - the sequence of activities required for effective cleaning and sanitizing,
    - the chemicals required,
    - proper handling and application of sanitation chemicals (e.g. concentrations, duration of application),
    - sanitation chemical solution temperatures,
    - equipment disassembly and assembly instructions,
    - inspection activities including pre-operational assessments,
    - documentation requirements, and
    - methods to prevent or minimize cross-contamination;
  - sanitation schedule for all equipment, rooms and utensils;
  - housekeeping and sanitation procedures required during operation (e.g. at change-over of product lines);
  - effectiveness monitoring (e.g. swab tests).
  - Use only sanitation chemicals approved in "Reference Listing of Accepted Construction, Packaging Materials and Non-Food Chemical Agents" published by the Canadian Food Inspection Agency;
  - Documented cleaning procedures include where appropriate:
    - removing gross debris from surfaces;
    - applying a detergent solution to loosen soil and bacteria;
    - rinsing with potable water to remove loosened soil and residues of detergent;
    - dry cleaning or other appropriate methods for removing and collecting residues and debris; and
    - where necessary, sanitizing with subsequent rinsing unless the manufacturers' instructions indicate that there is no scientific need for rinsing.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.47(1)(2)(10)

Dairy:
Milk Act (Ontario) R.R.O.1990, Reg.761, s.41

Other:
N/A

Are you in conformance?

At pre-determined intervals, review the written Sanitation Program for completeness, accuracy and suitability for the establishment's operations.

Record your observations to prove that the monitoring task was completed. Initial and date the record.

P4 Equipment Maintenance

P4.1 Preventive Maintenance and Calibration Program

What is the standard?

A written Preventive Maintenance and Calibration Program is developed and updated as required. The program outlines effective policies and procedures to ensure that equipment and devices that may impact on food safety function as intended and protect the safety and suitability of food. The program includes roles, responsibilities, frequencies, instructions for effective preventive maintenance and calibration activities and records to be completed and maintained.

What are the risks?

Improperly maintained or calibrated equipment can lead to contamination of food, ingredients or packaging materials. Deteriorating or poorly maintained equipment (e.g. pitted, cracked) can present physical hazards (e.g. flaking metal, nuts, bolts) or provide areas for bacterial growth. Over-lubrication of equipment can cause chemical contamination. Equipment and devices used to measure parameters that have an impact on food safety must be properly calibrated. If equipment or measuring devices used to perform critical process monitoring (e.g. pH, water activity, cooking temperature, concentration of restricted ingredients, metal detection) are not accurate, food safety hazards can result (e.g. inaccurate thermometers can result in a bacterial hazard).

How can you meet the standard?

- Develop an effective written Preventive Maintenance and Calibration Program that sets out:
  - procedures for maintenance and calibration of equipment and devices that impact on food safety, including:
    - personnel responsible for particular tasks,
    - description of preventive maintenance activities to be performed (e.g. grease, lubricate, clean or change equipment filters),
    - description of calibration activities to be performed (e.g. calibrate thermometer, water activity meter, scales),
    - required sequence of activities to perform preventive maintenance and calibration,
    - identification of materials or chemicals (e.g. lubricants, solvents) required,
    - documentation requirements, and
    - methods to prevent or minimize cross-contamination; and
  - preventive maintenance and calibration schedule or frequency of activities.
- Design the preventive maintenance and calibration program to ensure that the equipment functions as intended and that no physical, biological or chemical hazard potential results.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.46(1)(2)(7), 99(7)

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, review the written Preventive Maintenance and Calibration Program for completeness, accuracy and suitability for the establishment's operations.

Record your observations to prove that the monitoring task was completed. Initial and date the record.

P5 Pest Control | P5.1 Pest Control Program

What is the standard?

A written Pest Control Program is developed and updated as required. The program outlines effective policies and procedures to prevent entry and harbourage of pests, to detect and eliminate pests, and to protect the safety and suitability of food. The program includes roles and responsibilities, frequencies, instructions for pest control activities, and records to be completed and maintained.

What are the risks?

Pests (e.g. insects, rodents and birds) can contaminate food, ingredients, packaging materials and food contact surfaces. Pests in or around an establishment can lead to contamination from droppings, larvae and dead insects or animals or their parts.

How can you meet the standard?

- Develop an effective written Pest Control Program that sets out:
  - pest control procedures for the exterior and interior of the establishment including:
    - personnel responsible for particular tasks,
    - the activities to be performed,
    - the chemicals required,
    - the methods for proper handling and application of pest control chemicals to ensure that maximum residue limits are not exceeded,
    - the type and location of pest control devices (e.g. live traps, insect devices),
    - documentation requirements, and
    - methods to prevent or minimize cross-contamination; and
  - pest control schedule or frequency of activities.
- Ensure that birds and animals, other than any intended for slaughter, are excluded from the establishment.
- Use only pesticides that are registered under the *Pest Control Products Act* and regulations.
- Use only approved pesticides listed in "Reference Listing of Accepted Construction, Packaging Materials and Non-Food Chemical Agents" published by the Canadian Food Inspection Agency.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.48(1)(2)(7)

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, review the written Pest Control Program for completeness, accuracy and suitability for the establishment's operations.

Record your observations to prove that the monitoring task was completed. Initial and date the record.

P6 Recall | P6.1 Recall Program

What is the standard?

A written Recall Program is developed and updated as required. The program outlines effective policies and procedures that enable the identification and complete, rapid recall of any implicated food product. The program includes roles and responsibilities, details and methods of recall activities, and records to be completed and maintained. The recall program is tested for effectiveness and completeness at pre-determined intervals.

What are the risks?

Food recalls can be triggered by biological (e.g. *Salmonella*), chemical (e.g. undeclared allergens), or physical hazards (e.g. foreign material). Quickly regaining control of implicated lots of product is crucial in preventing or minimizing the risk of the hazard to consumers.

How can you meet the standard?

- Develop an effective written Recall Program that sets out:
  - personnel responsible for the co-ordination and implementation of a recall including their contact numbers and a description of each person's role;
  - procedures required to identify, locate and control (e.g. hold under supervision) recalled products until a product disposition is made (e.g. used for purposes other than human consumption; determined to be safe for human consumption; reprocessed in a manner to ensure their safety);
  - procedures to investigate the potential for other products to be affected, and locate and control them;
  - methods to investigate and respond to consumer complaints;
  - the capability to access customer and supplier names, addresses and contact numbers if required;
  - procedures to test the effectiveness of the recall program by performing a mock recall at pre-determined intervals;
  - procedures to notify the local CFIA office and other appropriate regulatory agencies in the event of a recall; and
  - documentation requirements.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.137(1)

Dairy:
Milk Act (Ontario) R.R.O. 1990. O.Reg. 761.s.127(2); s.129(3)(4)

Other:
N/A

Are you in conformance?

At pre-determined intervals, review the written recall program for completeness, accuracy and suitability for the establishment's operations.

Record monitoring results to prove that the monitoring task was completed. Initial and date the record.

P7 Water Safety | P7.1 Water Treatment Program

What is the standard?

Where potable municipal water is unavailable or not used, a written Water Treatment Program is developed and updated as required. The program ensures that water, ice or steam used for processes or applications that may impact on food safety meet the potability requirements of the appropriate regulatory authority and describes effective water treatment procedures to protect the safety and suitability of food. The program includes roles and responsibilities, frequencies, instructions and methods for effective water treatment, and records to be completed and maintained.

What are the risks?

The water, ice and steam supply of an establishment can be a source of contaminants. Since water, ice and steam can be used for a variety of purposes (e.g. sanitation, hand washing, ingredient processing aid), non-potable water can lead to contamination (e.g. *E. coli*) of food, ingredients, food contact surfaces or personnel. Treated water (e.g. boiler water, chlorinated water, flume water) can present a source of contaminants if the chemical treatment or treatment process is incorrectly performed.

How can you meet the standard?

- Develop and maintain an effective written Water Treatment Program for non-municipal water supply, re-circulated water and treated water that sets out:
  - water treatment procedures, including:
    - personnel responsible for particular tasks,
    - water treatment activities to be performed (e.g. chlorination, ozonation, treatment of boiler water),
    - chemicals required,
    - proper handling and application of water treatment chemicals (e.g. proper concentrations),
    - methods to prevent or minimize cross-contamination, and
    - documentation requirements;
  - water treatment schedule and frequency of activities; and
  - procedures to ensure water filters are effective and maintained in a sanitary manner.
- Use only boiler treatment chemicals listed in the "Reference Listing of Accepted Construction Materials, Packaging Materials and Non-Food Chemical Products" published by the Canadian Food Inspection Agency or the chemicals for which the manufacturer has a letter of no objection from Health Canada.
- Ensure that water re-circulated for re-use is treated and maintained in such a condition that no risk to the safety and suitability of food results from its use.

Which regulations apply to this standard?

Meat & Poultry:
N/A

Dairy:
N/A

All:
Safe Drinking Water Act (Ontario, 2002)
O. Reg 169/03 Ontario Drinking Water Quality Standards Regulation,
O. Reg 170/03 Drinking Water Systems

Other:
N/A

Are you in conformance?

At pre-determined intervals, review the written Water Treatment Program for completeness, accuracy and suitability for the establishment's operations.

Record your observations to prove that the monitoring task was completed. Initial and date the record.

What is the standard?

A written Water Safey Monitoring Program is developed and updated as required. The program ensures that establishment water, ice and steam used for processes or applications that may impact on food safety meet the potability requirements of the appropriate regulatory authority, and describes effective water, ice and steam sampling and testing procedures to protect the safety and suitability of food. The program includes roles and responsibilities, frequencies, instructions and methods for effective water sampling and testing, and records to be completed and maintained.

What are the risks?

Water, ice and steam can be a source of biological or chemical contaminants. Since water, ice and steam can be used for a variety of purposes (e.g. sanitation, hand washing, ingredient, processing aid), it is important to perform water sampling and testing to confirm potability. Potential water contaminants include bacteria (e.g. *E. coli*) and chemicals (e.g. boiler chemicals).

How can you meet the standard?

- Develop an effective written water safety monitoring program that sets out:
  - water sampling and testing procedures, including:
    - personnel responsible for particular tasks,
    - description of water sampling and testing activities to be performed (e.g. tests to be performed – chlorine levels, aerobic plate count, coliform, faecal coliform, boiler chemical levels),
    - required sequence of activities to perform water sampling and testing activities,
    - identification of chemicals and reagents required,
    - sample submission to an accredited laboratory, where applicable, and
    - documentation requirements (records should include the water source, sample site, analytical result, analyst and date of sample);
  - water sampling and testing schedule and frequency of activities; and
  - actions to be taken when water testing results indicate water potability criteria have not been met.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.32(1)(2)(3), 34(1a)(2ab)(3ab)

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, review the written Water Safety Monitoring Program for completeness, accuracy and suitability for the establishment's operations.

Record your observations to prove that the monitoring task was completed. Initial and date the record.

Training

T1 Personnel Practices
21 T1.1 Personnel Practices Training

T2 Shipping, Receiving, Handling and Storage
22 T2.1 Shipping, Receiving, Handling and Storage Training

T3 Sanitation
23 T3.1 Sanitation Training

T4 Equipment Maintenance
24 T4.1 Preventive Maintenance and Calibration Training

T5 Pest Control
25 T5.1 Pest Control Training

T6 Recall
26 T6.1 Recall Training

T7 Water
27 T7.1 Water Treatment Training
28 T7.2 Water Safety Monitoring Training

T8 Critical Control Point
29 T8.1 Critical Control Point Training

T9 Process Technology
30 T9.1 Equipment and Specialized Process Training

What is the standard?

Personnel Practices Training is delivered and updated as required to ensure that personnel understand and are competent in the policies and procedures necessary to protect the safety and suitability of food. Training is delivered at an adequate frequency to ensure personnel understanding remains current.

What are the risks?

Establishment personnel play a major role in the production of safe food. Employees and visitors who do not follow proper personnel practices can cause biological, chemical or physical contamination of food (e.g. jewelry falling into food, uncontrolled sneezing over food). Training increases awareness of potential hazards and the responsibilities that personnel have in minimizing contamination risks.

How can you meet the standard?

- Train all personnel on the concepts and policies of an effective personnel practices program including all elements of the written program developed in response to the Personnel Practices Program (P2.1).
- Routinely review and update training to ensure it is appropriate and current.
- Deliver the training to personnel at the start of employment and provide refresher training to personnel at appropriate intervals.
- Upon completion of personnel training, note the date, type of training, name of trainer and name of participant(s) in a permanent record.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.57(1)(2)(3)

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, review the Personnel Practices Training to ensure that it is current and appropriate for the establishment's operations.

At pre-determined intervals, review personnel training records for conformance, completeness and accuracy.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

T2 Shipping, Receiving, Handling and Storage

T2.1 Shipping, Receiving, Handling and Storage Training

What is the standard?

Shipping, Receiving, Handling and Storage Training is delivered and updated as required to ensure that personnel involved in shipping, receiving, handling and storage activities understand and are competent in the procedures necessary to protect the safety and suitability of food. Training is delivered at an adequate frequency to ensure personnel understanding remains current.

What are the risks?

Incoming and outgoing materials that are not properly received, stored, handled or shipped can be a source of biological, chemical and physical contamination. Materials received, stored, handled or shipped in substandard condition (e.g. wrong temperature, wrong product, damaged condition), in a container that is unsuitable or in an improper manner can lead to contamination. Materials handled carelessly and stored improperly (e.g. not covered properly, not refrigerated) can lead to contamination. Proper training of employees reduces the risk of biological, chemical and physical contamination of food.

How can you meet the standard?

- Train designated personnel on the concepts, policies and procedures of an effective shipping, receiving, handling, and storage program including all elements of the written program developed in response to the Shipping, Receiving, Handling and Storage Program (P2.1).
- Routinely review and update training to ensure it is appropriate and current.
- Deliver the training to employees at the start of employment and provide refresher training at appropriate intervals.
- Upon completion of personnel training, note the date, type of training, name of trainer and name of participant(s) in a permanent record.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.57(1)

Dairy:
Milk Act (Ontario) O.Reg. 761. s.87

Other:
N/A

Are you in conformance?

At pre-determined intervals, review the Shipping, Receiving, Handling and Storage Training to ensure that it is current and appropriate for shipping and receiving activities.

At pre-determined intervals, review personnel training records for conformance, completeness and accuracy.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

What is the standard?

Sanitation Training is delivered and updated as necessary to ensure personnel involved in sanitation activities understand and are competent in the procedures necessary to protect the safety and suitability of food. Training is delivered at an adequate frequency to ensure personnel understanding remains current.

What are the risks?

Poor or improper establishment sanitation can lead to contamination (e.g. bacterial growth, cleaning chemical residues). Improper chemical concentrations, application or rinsing procedures can lead to contamination of food with sanitation chemicals. Proper training of sanitation employees reduces the risk of biological, chemical and physical contamination of food.

How can you meet the standard?

- Train designated personnel on the concepts, policies and procedures of an effective sanitation program including all elements of the written program developed in response to the Sanitation Program (P3.1).
- Routinely review and update training to ensure it is appropriate and current.
- Deliver the training to sanitation personnel at the start of employment and provide refresher training at appropriate intervals.
- Upon completion of personnel training, record the date, type of training, name of trainer and name of participant(s) in a permanent record.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.49(2b), 57(1)

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, review the Sanitation Training to ensure that it is current and appropriate for sanitation activities.

At pre-determined intervals, review sanitation personnel training records for conformance, completeness and accuracy.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

T4 Equipment Maintenance

T4.1 Preventive Maintenance and Calibration Training

What is the standard?

Preventive Maintenance and Calibration Training is delivered and updated as required to ensure personnel involved in preventive maintenance and calibration activities understand and are competent in the procedures necessary to protect the safety and suitability of food. Training is delivered at an adequate frequency to ensure personnel understanding remains current.

What are the risks?

Poor or improper maintenance and calibration activities can lead to contamination. Personnel performing maintenance and calibration tasks can present a source of biological contamination (e.g. standing on equipment to work on overhead items), a source of chemical contamination (e.g. non-food grade grease) or a source of physical contamination (e.g. tools or other items falling into product or equipment). Improperly performed maintenance activities can lead to malfunctioning equipment which can result in leaking of lubricants or chemicals, bacterial growth or contamination with damaged equipment. Proper training of personnel performing maintenance and calibration activities reduces the risk of biological, chemical and physical contamination of food.

How can you meet the standard?

- Train designated personnel on the concepts, policies and procedures of an effective preventive maintenance and calibration program including all elements of the written program developed in response to the Preventive Maintenance and Calibration Program (P4.1).
- Routinely review and update training to ensure it is appropriate and current.
- Deliver the training to maintenance personnel at the start of employment and provide refresher training at appropriate intervals.
- Upon completion of personnel training, record the date, type of training, name of trainer and name of participant(s) in a permanent record.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.57(1)

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, review the Preventive Maintenance and Calibration Training to ensure that it is current and appropriate for maintenance monitoring and corrective action activities.

At pre-determined intervals, review maintenance personnel training records for conformance, completeness and accuracy.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

What is the standard?

Pest Control Training is delivered and updated as required to ensure that personnel involved in pest control activities understand and are competent in procedures necessary to protect the safety and suitability of food. Training is delivered at an adequate frequency to ensure personnel understanding remains current.

What are the risks?

Poor or improper pest control activities can lead to contamination (e.g. food contamination by pesticides or contamination from pests that gain entry to the establishment). Proper training of personnel performing pest control activities reduces the risk of contamination of food.

How can you meet the standard?

- Ensure that personnel performing pest control activities are adequately trained through one of the following methods:
  - ensure that contracted pest control operators or employees are certified to apply pesticides in a food establishment; or
  - train designated personnel on the concepts, policies, and procedures of an effective pest control program including all elements of the written program developed in response the Pest Control Program (P5.1).
- At the start of employment/engagement and at appropriate intervals,
  - review the qualifications of contracted pest control operators or certified employees; or
  - deliver the training to personnel who perform pest control activities and deliver refresher training at appropriate intervals.
- Upon completion of personnel training, record the date, type of training, name of trainer and name of participant(s) in a permanent record.
- Routinely review and update training to ensure it is appropriate and current.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.57(1)

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, review the qualifications of contracted pest control operators or certified employees or ensure the training schedule is being followed as written and review the Pest Control Training to ensure that it is current and effective.

At pre-determined intervals, review pest control training records for conformance, completeness and accuracy.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

What is the standard?

Recall Training is delivered and updated as required to ensure that personnel involved in recall activities understand and are competent in procedures necessary in the event that the safety and suitability of food is compromised. Training is delivered at an adequate frequency to ensure personnel understanding remains current.

What are the risks?

Food recalls can be triggered by biological (e.g. *Salmonella*), chemical (e.g. undeclared allergens) or physical hazards (e.g. foreign material). Quickly re-gaining control of implicated lots of product is crucial in preventing or minimizing the risk of the hazard to consumers.

How can you meet the standard?

- Train designated personnel on the concepts, policies and procedures of an effective recall program including all elements of the written program developed in response to the Recall Program (P6.1).
- Routinely review and update training to ensure it is appropriate and current.
- Deliver training to all personnel who have a responsibility as part of the recall program and provide refresher training at appropriate intervals.
- Upon completion of personnel training, record the date, type of training, name of trainer and name of participant(s) in a permanent record.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.57(1)

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals review the Recall Training to ensure that it is current and appropriate for recall monitoring and corrective action activities.

At pre-determined intervals review recall personnel training records for conformance, completeness and accuracy.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

What is the standard?

Water Treatment Training is delivered and updated as required to ensure that personnel involved in water treatment activities understand and are competent in procedures necessary to protect the safety and suitability of food. Training is delivered at an adequate frequency to ensure personnel understanding remains current.

What are the risks?

The water, ice and steam supply of an establishment can be a source of contaminants. Since water, ice and steam can be used for a variety of purposes (e.g. sanitation, hand washing, ingredient, processing aid), non-potable water can contaminate food, ingredients, food contact surfaces and personnel. Treated water (e.g. boiler water, chlorinated water, flume water) can be a source of contaminants if the chemical treatment or treatment process is incorrectly performed.

How can you meet the standard?

- Train designated personnel on the concepts, policies and procedures of an effective water treatment program including all elements of the written program developed in response to the Water Treatment Program (P7.1).
- Routinely review and update training to ensure it is appropriate and current.
- Deliver training to employees responsible for water treatment activities and provide refresher training at appropriate intervals.
- Upon completion of personnel training, record the date, type of training, name of trainer and name of participant(s) in a permanent record.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.57(1)

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, review the Water Treatment Training to ensure that it is current and appropriate.

At pre-determined intervals, review water treatment personnel training records for conformance, completeness and accuracy.

Record monitoring results to prove that the monitoring tasks were completed. Initial and date the record.

T7 Water Safety | T7.2 Water Safety Monitoring Training

What is the standard?

Water Safety Monitoring Training is delivered and updated as required to ensure that personnel involved in water monitoring activities understand and are competent in procedures necessary to protect the safety and suitability of food. Training is delivered at an adequate frequency to ensure personnel understanding remains current.

What are the risks?

Water, ice and steam can be a source of biological or chemical contaminants. Since water, ice and steam can be used for a variety of purposes (e.g. sanitation, hand washing, ingredient or processing aid), it is important to perform water sampling and testing to confirm potability. Potential water contaminants include bacteria (e.g. *E. coli*) and chemicals (e.g. boiler chemicals).

How can you meet the standard?

- Train designated personnel on the concepts, policies and procedures of an effective water safety monitoring program including all elements of the written program developed in response to the Water Safety Monitoring Program (P7.2).
- Routinely review and update training to ensure it is appropriate and current.
- Deliver the training to personnel responsible for water monitoring activities and provide refresher training at appropriate intervals.
- Upon completion of personnel training, record the date, type of training, name of trainer and name of participant(s) in a permanent record.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.57(1)

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, review the Water Safety Monitoring Training to ensure that it is current and appropriate.

At pre-determined intervals, review water safety monitoring personnel training records for conformance, completeness and accuracy.

Record monitoring results to prove that the monitoring tasks were completed. Initial and date the record.

T8 Critical Control Point | T8.1 Critical Control Point Training

What is the standard?

Critical Control Point (CCP) Training is delivered and updated as required to ensure that all personnel involved in CCP activities understand and are competent in the procedures necessary to protect the safety and suitability of food. Training is delivered at an adequate frequency to ensure personnel understanding remains current.

What are the risks?

CCPs are identified for hazards that cannot be controlled by the prerequisite programs. CCPs are designed to reduce, control or eliminate potential hazards. If CCP procedures are not properly performed and monitored, the safety of the food is compromised. If personnel performing CCP procedures are not properly trained, biological, chemical or physical hazards can occur.

How can you meet the standard?

- Train designated personnel on the concepts and procedures of an effective HACCP plan including all elements of the written documentation developed for Form 8 of the HACCP plan. For each CCP, deliver training that includes policies, procedures and controls for:
  - critical limits;
  - monitoring tasks (how to check that the critical limits are met);
  - corrective actions (what to do if critical limits are not met);
  - required documentation to prove CCP monitoring and, if necessary, any corrective actions that have taken place; and
  - ensuring that personnel responsible for monitoring a CCP identified in the establishment's manufacturing process receive training before being assigned the work task or procedure.
- Routinely review and update training to ensure it is appropriate and current.
- Deliver the CCP training at the start of employment to personnel responsible for monitoring CCPs and provide refresher training at appropriate intervals.
- Upon completion of personnel training, record the date, type of training, name of trainer and name of participant(s) in a permanent record.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.57(1)

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, review the CCP Training to ensure that it is current and appropriate for CCP monitoring and corrective action activities.

At pre-determined intervals, review CCP personnel training records for conformance, completeness and accuracy.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

T9 Process Technology

T9.1 Equipment and Specialized Process Training

What is the standard?

A written Equipment and Specialized Process Training Program is developed and updated as required to ensure that personnel assigned to operate specialized equipment that can impact on food safety and suitability understand and are competent in the procedures necessary to protect the safety and suitability of food. The training program is delivered at an adequate frequency to ensure employee understanding remains current.

What are the risks?

Specialized process technology typically changes the characteristics of food products. If this technology does not function properly or is operated by inadequately trained personnel, contamination can result, affecting the safety and suitability of food.

How can you meet the standard?

- Develop a written training program or an off-site training schedule that ensures personnel responsible for operating specialized equipment or technology that can impact on food safety have attained an adequate level of knowledge to ensure the safety and suitability of food.
- Routinely review and update training to ensure programs are appropriate and current.
- At the start of employment and at appropriate intervals:
  - deliver the training program to personnel who operate specialized equipment or technology; or
  - organize appropriate off-site training (e.g. equipment manufacturer's training course).
- Upon completion of personnel training, record the date, type of training, name of trainer and name of participant(s) in a permanent record.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.57(1), 99(4f)

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, ensure the off-site training schedule is being followed as written or review the written specialized equipment or technology training program to ensure that it is current and effective.

At pre-determined intervals, review specialized equipment or technology training records for conformance, completeness and accuracy.

Record monitoring results to prove that the monitoring tasks were completed. Initial and date the record.

Operational Controls

O1 Personnel Practices

33 O1.1 Personal Practices
34 O1.2 Hand Washing
35 O1.3 Clothing/Footwear/Headwear
36 O1.4 Storage – Clothing/Utensils/Equipment
37 O1.5 Injuries and Wounds
38 O1.6 Evidence of Illness
39 O1.7 Access and Traffic Patterns
40 O1.8 Chemical Use
41 O1.9 Chemicals Used During Operations

O2 Shipping, Receiving, Handling and Storage

42 O2.1 Conveyance Vehicles
43 O2.2 Loading and Unloading Practices
44 O2.3 Received Products
45 O2.4 Shipping Conditions
46 O2.5 Returned and Defective Food Products
47 O2.6 Allergen Control
48 O2.7 Packaging
49 O2.8 Storage Practices
50 O2.9 Chemical Storage
51 O2.10 Waste Management

O3 Sanitation

52 O3.1 Cleaning and Sanitizing
53 O3.2 Pre-operational Assessment

O4 Equipment Maintenance

54 O4.1 Preventive Maintenance and Calibration Monitoring

O5 Pest Control

55 O5.1 Pest Control Monitoring

O6 Recall

56 O6.1 Product Code/Labelling Monitoring
57 O6.2 Mock Recalls

O7 Water Safety

58 O7.1 Water Treatment Monitoring
59 O7.2 Water Safety Monitoring

What is the standard?

All personnel follow personal practices that prevent or minimize contamination of food, ingredients, packaging materials and food contact surfaces. Personnel do not eat, use tobacco, drink, chew gum, spit, sneeze or cough over food or food contact surfaces, or perform any other potentially hazardous activities in areas where food or packaging materials are being processed, handled or stored. Objects, such as jewelry, that may cause contamination are removed or are suitably covered prior to starting work duties. Personnel maintain an appropriate degree of personal cleanliness.

What are the risks?

The potential for contamination of food, ingredients, packaging materials and food contact surfaces by microorganisms and physical contaminants is greatly increased if activities such as eating, drinking, gum chewing, use of tobacco, jewelry wearing or spitting are practiced in food handling areas. Foreign objects found in food products can lead to consumer complaints or injuries. Personnel who do not maintain an appropriate degree of personal cleanliness can contaminate food.

How can you meet the standard?

- Ensure that personnel practice behaviours that prevent or minimize contamination of food, ingredients, packaging materials or food contact surfaces, including:
  - no personal food, beverages or medication in food handling or storage areas;
  - no smoking, chewing tobacco, chewing gum or spitting;
  - no wearing of jewelry (or jewelry is suitably covered), nail polish, false eyelashes or nails, etc. in food handling or storage areas;
  - no glass containers (except those specifically for the product being produced) permitted in food handling and storage areas; and
  - no items that may cause physical contamination in food handling and storage areas (e.g. badges, pins, barrettes).
- Ensure that personnel maintain an adequate degree of personal cleanliness (e.g. shower or bathe prior to work).

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.53(5)(6)(7)

Dairy:
Milk Act (Ontario) O.Reg. 761, s.80

Other:
Health Protection and Promotion Act (Ontario) O.Reg. 562, s.65; s.67

Are you in conformance?

At pre-determined intervals, confirm that all personnel are following appropriate behaviours to ensure food, ingredients, packaging materials and food contact surfaces are not contaminated. Confirm that personnel reporting to work maintain an adequate level of personal cleanliness and hygiene.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

What is the standard?

To prevent or minimize food contamination, effective hand washing is performed by all personnel who enter the food processing and handling areas or who handle food, ingredients, packaging materials or food contact surfaces. Hand washing is performed with warm potable water, soap and hygienic drying apparatus upon entering food processing and handling areas; prior to handling food, ingredients, packaging materials or food contact surfaces; following breaks or use of toilet facilities; and when hands become contaminated.

What are the risks?

Personnel are a common source of bacterial contamination of food, ingredients, packaging materials and food contact surfaces. Since allergens can be carried on the hands of food handlers, proper hand-washing procedures must be followed after handling products containing allergens. Proper and frequent hand washing helps to reduce the potential for bacterial contamination.

How can you meet the standard?

- Ensure that personnel wash their hands properly and frequently whenever entering the establishment or work area, following use of personal welfare areas (e.g. lunch room, toilet facilities, change room) and following any action that may contaminate their hands (e.g. tying of shoes, sneezing, coughing).

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.53(1)(2)(3)(7)

Dairy:
N/A

Other:
Health Protection and Promotion Act (Ontario) O.Reg. 562, s.65

Are you in conformance?

At pre-determined intervals, confirm that personnel are properly following hand-washing procedures.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

What is the standard?

Clothing, footwear and headwear worn by personnel and visitors in processing and handling areas prevent or minimize the contamination of food, ingredients, packaging materials and food contact surfaces.

What are the risks?

Cross-contamination with microorganisms or trace allergen products is commonly due to direct or indirect transfer of microorganisms or allergens from people to food, ingredients, packaging materials or food contact surfaces. Cross-contamination can occur from unhygienic clothing or footwear (e.g. soiled clothing).

How can you meet the standard?

- Ensure all personnel and visitors wear suitable clothing (e.g. coats, aprons, gloves, head covering, face covering or footwear) in areas where food, ingredients, packaging materials and food contact surfaces are exposed.
- Ensure that clothing, footwear and headwear are of a design that is durable and cleanable or single-use.
- Ensure that personnel put suitable clothing and footwear on before entering food handling or storage areas.
- Ensure that clothing, footwear and headwear are clean (e.g. free of soil) and in good repair (e.g. no loose threads, holes).
- Ensure that clothing and footwear are not worn or taken into areas of the establishment where they have the potential to cause contamination (e.g. incompatible processing areas – raw or cooked; personal welfare areas; outside the establishment).

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.53(4), 54(1)(2)

Dairy:
Milk Act (Ontario) R.R.O. 1990. O.Reg. 761.s.80(2); s.107(1)

Other:
Health Protection and Promotion Act (Ontario) O.Reg. 562, s.11; s.65; s.67

Are you in conformance?

At pre-determined intervals, confirm that all personnel are wearing appropriate clothing for the task being performed and that the clothing is clean and in a good state of repair. This review should be performed at various times to ensure that personnel performing all activities (e.g. operational, sanitation, maintenance) are wearing clothing suitable for each activity.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

What is the standard?

Clothing (including footwear and headwear), utensils and equipment used in the establishment are stored and handled in a manner that prevents or minimizes contamination of food, ingredients, packaging materials and food contact surfaces.

What are the risks?

Cross-contamination with microorganisms or trace allergen products is commonly due to direct or indirect transfer of microorganisms or allergens from people to food, ingredients, packaging materials or food contact surfaces. Improperly stored and handled clothing, utensils and equipment can be a source of cross-contamination (e.g. soiled clothing left on food contact surfaces, use of contaminated utensils).

How can you meet the standard?

- Designate acceptable areas for the storage of clothing (e.g. aprons, gloves, smocks), utensils and equipment that will not lead to cross-contamination.
- Ensure that personnel properly store clothing, utensils and equipment in designated areas.
- Ensure that clothing, utensils and equipment are not taken into areas of the establishment where they have the potential to cause contamination (e.g. incompatible processing areas – raw or cooked; personal welfare areas; outside the establishment).

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.50(8)

Dairy:
Milk Act (Ontario) R.R.O. 1990. O.Reg. 761.s.86(1)

Other:
Health Protection and Promotion Act (Ontario) O.Reg. 562, s.11; s. 56; s.58–59; s.65; s.67; s.81

Are you in conformance?

At pre-determined intervals, confirm that personnel are storing clothing, footwear, utensils and equipment in designated areas.

Confirm that clothing, footwear, utensils and equipment are not worn or taken into areas of the establishment that have the potential to cause contamination.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

What is the standard?

Personnel having open cuts or wounds do not handle exposed food, ingredients, packaging materials or food contact surfaces unless measures are taken to prevent direct or indirect contamination of food. When injuries or wounds occur during food processing or handling activities, measures are taken to ensure that suspect food, ingredient and packaging materials are disposed of and food contact surfaces are cleaned and sanitized.

What are the risks?

Open cuts and wounds that are not appropriately bandaged or covered can be a source of biological contaminants.

How can you meet the standard?

- Ensure that personnel with open cuts or wounds take appropriate precautions to avoid contaminating food, ingredients, packaging materials and food contact surfaces including:
  - securely protecting all open cuts and wounds with waterproof bandages or coverings;
  - changing all waterproof coverings at a frequency that allows for continual protection; and
  - reporting all cuts and wounds sustained in the workplace to management immediately for appropriate first aid and application of protective coverings.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.56(1)

Dairy:
N/A

Other: *Health Protection and Promotion Act (Ontario)* O.Reg. 562, s.26

Are you in conformance?

At pre-determined intervals, observe personnel to confirm that all cuts and wounds are securely covered with waterproof covering or bandages.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

What is the standard?

Personnel known or suspected to be suffering from or to be carriers of a disease transmissible through food do not enter any food processing or handling areas, or handle food, ingredients, packaging materials or food contact surfaces without taking measures to prevent contamination.

What are the risks?

Personnel suffering from diseases transmissible through food (e.g. *Salmonella*, Hepatitis A) can transmit these diseases to food products and ultimately infect the consumer.

How can you meet the standard?

- Ensure personnel with diseases transmissible through food do not handle or work around food, ingredients, packaging materials or food contact surfaces.
- Ensure personnel immediately report to management when they are suffering from, show symptoms of, or are known to be carriers of a disease transmissible through food.
- Ensure medical examination of a food handler is carried out if clinically or epidemiologically indicated.
- Ensure that the following symptoms are reported to management so that any need for medical examination or possible exclusion from food handling can be considered:
  - jaundice;
  - diarrhea;
  - vomiting;
  - fever;
  - sore throat with fever;
  - visibly infected skin lesions (e.g. boils, cuts); or
  - discharges from the ear, eye or nose.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.56(1)

Dairy:
Milk Act (Ontario) R.R.O. 1990. O.Reg. 761.s.107(1)

Other:
Health Protection and Promotion Act (Ontario) O.Reg. 562, s.65(1); s.66

Are you in conformance?

At pre-determined intervals, observe personnel for evidence of illness or behaviour that may indicate sickness (e.g. frequent trips to washroom, vomiting). Ensure that personnel suffering from or known to be carriers of a disease transmissible through food do not handle exposed food, ingredients, packaging materials or food contact surfaces.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

What is the standard?

Access of persons is controlled to prevent or minimize contamination of food, ingredients, packaging materials and food contact surfaces. Personnel follow designated traffic patterns to prevent or minimize contamination of food, ingredients, packaging materials and food contact surfaces.

What are the risks?

Cross-contamination with microorganisms or allergens is commonly due to direct or indirect transfer of microorganisms or allergens from people to food, ingredients, packaging materials or food contact surfaces. Personnel and visitors can be a source of contamination to food, ingredients, packaging materials and food contact surfaces if their movement and activities are not controlled. If access to the establishment is not controlled and designated traffic patterns are not followed, contamination can result.

How can you meet the standard?

- Control access to the establishment to prevent or minimize entry of unauthorized individuals.
- Develop and enforce appropriate personnel and visitor traffic patterns to reduce the potential for cross-contamination.
- Ensure that personnel and visitors follow the designated traffic patterns and procedures to reduce the risk of contamination (e.g. personnel handling raw products do not enter ready-to-eat product areas).

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.55

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, confirm that access to the establishment is controlled and that personnel and visitors are following designated traffic patterns and procedures to reduce the risk of contamination.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

What is the standard?

Chemicals are mixed in clean, correctly labelled containers, in the correct concentrations, and are dispensed and handled only by authorized and properly trained personnel. Chemicals are suitable for use within a food processing establishment and when used correctly do not present a food safety hazard.

What are the risks?

Sanitation chemicals that are not dispensed and handled by properly trained personnel according to label instructions can lead to ineffective sanitation activities or chemical residues on equipment and surfaces. Maintenance chemicals and lubricants that are not dispensed or handled properly can lead to contamination (e.g. over-greasing). Chemicals mixed or stored in containers that are not clean or correctly labelled can contaminate food, ingredients, packaging materials or food contact surfaces if the chemicals are not used for the intended purpose.

How can you meet the standard?

- Ensure that chemicals used within the establishment are listed in the "Reference Listing of Accepted Construction, Packaging Materials and Non-food Chemical Agents" published by the Canadian Food Inspection Agency or the manufacturer has a "letter of no objection" from Health Canada.
- Ensure that chemicals are measured to ensure correct concentrations for effective sanitation or maintenance activities.
- Ensure that personnel applying chemicals (e.g. sanitation chemicals, maintenance chemicals, lubricants and solvents) are appropriately trained and authorized to handle and apply them.
- Ensure that personnel handle chemicals in a manner that prevents or minimizes contamination of food, ingredients, packaging materials and food contact surfaces.
- Ensure that personnel use properly labelled containers for dispensing and handling of chemicals and clean or rinse containers properly when finished.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.49(2b)

Dairy:
N/A

Other:
Health Protection and Promotion Act (Ontario) O.Reg. 562, s.63; s.79

Are you in conformance?

At pre-determined intervals, confirm that only trained personnel are dispensing and handling chemicals. Confirm that chemicals are handled, mixed and applied in the correct concentrations and in a manner that prevents or minimizes contamination. Confirm that containers used for chemical mixing and handling are properly labelled, used only for the intended purpose and are cleaned or rinsed properly following use.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

What is the standard?

Chemicals used during operations are handled and stored in a manner that prevents contamination of food, ingredients, packaging materials and food contact surfaces. Chemicals used during operations are in appropriately labelled containers or dispensers.

What are the risks?

Chemicals used during operations can contaminate food, ingredients, packaging materials, food contact surfaces and personnel if chemical handling, mixing and storage activities are not performed correctly (e.g. chemicals in containers without lids can spill). Overspray of sanitation chemicals can lead to chemical or biological contamination during operational cleaning activities.

How can you meet the standard?

- Ensure that chemicals (e.g. sanitation chemicals, maintenance chemicals, lubricants, solvents) used in food handling areas during operations are stored and handled in a manner that prevents or minimizes contamination of food, ingredients, packaging materials or food contact surfaces.
- Ensure that cleaning activities required during operations are performed as written in the Sanitation Program (P3.1) and do not create the potential for contamination of food, ingredients, packaging materials or food contact surfaces.
- Ensure that maintenance activities required during operations do not create the potential for contamination of food, ingredients, packaging materials and food contact surfaces.
- Take measures to ensure that chemicals in food handling areas do not contaminate food, ingredients, packaging materials or food contact surfaces (e.g. cover with plastic covers or use curtains).

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.49(1)

Dairy:
Milk Act (Ontario) R.R.O. 1990. O.Reg. 761.s.43(1)

Other:
Health Protection and Promotion Act (Ontario) O.Reg. 562, s.63; s.79

Are you in conformance?

At pre-determined intervals, observe handling and storage of chemicals during operations to confirm that contamination of food, ingredients, packaging materials and food contact surfaces is prevented or minimized. Observe sanitation and maintenance activities taking place during operations to confirm that chemical use does not cause contamination.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

O2 Shipping, Receiving, Handling and Storage

O2.1 Conveyance Vehicles

What is the standard?

Conveyance vehicles and containers used for transport of food, ingredients or packaging materials are suitable for the intended purpose and constructed to permit effective sanitation and pest control activities. Incoming and outgoing vehicles and containers are assessed before and during unloading and loading to ensure they are suitable for the intended purpose.

What are the risks?

Food, ingredients and packaging materials can be contaminated during transportation if the conveyance vehicle or container is not suitable for the materials being transported. Conveyance vehicles or containers that are not properly constructed or cleaned can lead to a number of hazards including: physical contamination from dust and foreign material; chemical contamination from unsuitable surfaces or trace chemicals from previous loads; and biological contamination from improperly cleaned areas that can result in microbial growth.

How can you meet the standard?

- Ensure that incoming and outgoing conveyance vehicles and containers used to transport food, ingredients and packaging materials are constructed of materials that facilitate effective sanitation and pest control activities and do not present any biological, chemical or physical hazards.
- Ensure that incoming and outgoing conveyance vehicles and containers used to transport food, ingredients and packaging materials are inspected to ensure adequate cleanliness, repair, condition and suitability for the materials being transported.
- Ensure that conveyance vehicles and containers permit effective separation of incompatible foods or products where necessary during transportation.
- When tankers are used, ensure that a cleaning certificate or appropriate record (e.g. wash ticket) is provided before loading or unloading commences.
- Ensure that shipping and receiving personnel are aware of all procedures necessary to protect the safety and suitability of food.
- Where appropriate, particularly in bulk transportation, containers and conveyance vehicles are designated and marked "For Food Use Only" and are used only for that purpose.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.134(1)

Dairy:
Milk Act (Ontario) R.R.O. 1990, Reg. 761, s.35(1); s.36(1),(2); s.39; s.44(1),(2); s.45(1)

Other:
Health Protection and Promotion Act (Ontario) O.Reg. 562, s.18

Are you in conformance?

At pre-determined intervals, during shipping, receiving and storage, confirm that conveyance vehicles and containers are being examined for suitability for the intended purpose (e.g. cleanliness, structural condition, evidence of contamination). Ensure only personnel who have completed the Shipping, Receiving, Handling and Storage Training (T2.1) are performing conveyance vehicle and container inspections.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

O2 Shipping, Receiving, Handling and Storage

O2.2 Loading and Unloading Practices

What is the standard?

Contents of conveyance vehicles and containers are loaded, arranged, handled and unloaded in a manner that protects the safety and suitability of food.

What are the risks?

Contamination or damage of food, ingredients and packaging materials can occur during transportation or during loading or unloading if shipping and receiving procedures are not properly followed. When loads are not properly handled, loaded or unloaded, contamination can occur from a variety of sources (e.g. forklifts can puncture holes in product containers leading to the introduction of microorganisms or physical contaminants; incompatible products can cross-contaminate each other). Damage during transportation can result in exposure of food products leading to contamination and spoilage.

How can you meet the standard?

- Ensure that food, ingredients and packaging materials are sufficiently protected, packaged securely or placed in suitable containers prior to shipping and upon delivery.
- Ensure that outgoing loads are loaded and arranged in a manner that prevents or minimizes shifting or damage during transportation.
- Ensure that outgoing loads are arranged so that incompatible products are adequately separated (e.g. raw versus cooked, food versus non-food, allergen versus non-allergen).
- Ensure that incoming materials are unloaded and stored in a manner that does not cause damage or contamination.
- Ensure that temperatures of incoming and outgoing loads are appropriate.
- Ensure that practices during loading and unloading do not damage or contaminate the food, ingredients or packaging materials.
- Ensure that chemicals are either received separately from food, ingredients and packaging materials or are received at a different location in the establishment to prevent or minimize cross-contamination.

Which regulations apply to this standard?

Meat & Poultry:
N/A

Dairy:
Milk Act (Ontario) R.R.O. 1990. O.Reg. 761.s.122(1g)

Other:
N/A

Are you in conformance?

At pre-determined intervals, confirm that food, ingredients and packaging materials are being adequately protected, arranged, handled and loaded or unloaded during shipping and receiving in a manner that prevents or minimizes damage and contamination. Ensure that only personnel who have completed the Shipping, Receiving, Handling and Storage Training (T2.1) are performing food, ingredient and packaging material loading and unloading activities.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

O2 Shipping, Receiving, Handling and Storage

O2.3 Received Products

What is the standard?

Incoming food, ingredients and packaging materials are assessed for evidence of food safety hazards and are controlled to protect their safety and suitability.

What are the risks?

Prevention of food, ingredient and packaging material contamination begins with control of incoming materials. Inadequate incoming material controls can result in product contamination, inadequate processing or misrepresentation of the product. Hazardous incoming ingredients and materials can potentially result in unsafe finished products regardless of the measures taken at the establishment. Contamination or damage of food, ingredients and packaging materials can occur during transportation.

How can you meet the standard?

- Use only sound, suitable raw materials or ingredients. Do not accept any raw material or ingredient that is known to contain parasites, undesirable microorganisms, pesticides, veterinary drugs, or toxic, decomposed or extraneous substances which would not be reduced to an acceptable level by normal sorting or processing.
- Perform a visual inspection upon receipt of ingredients and packaging materials to ensure that:
  - received goods are from the intended supplier;
  - received goods have no evidence of contamination, spoilage or damage;
  - received goods are at the appropriate temperature and show no evidence of thawing; and
  - received goods match those listed on the purchase order (i.e. the correct ingredients or packaging materials were shipped).

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.63(2)(3)(4), 78(2), 84, 101, 132

Dairy:
Milk Act (Ontario) R.R.O. 1990 O.Reg. 761.s.49(1)(2); s.50(3); s.51(1)(2)

Other:
N/A

Are you in conformance?

At pre-determined intervals, observe the receipt of incoming ingredients and packaging materials to ensure that there is no evidence of contamination or damage. Ensure that received goods are verified to be from the intended supplier and match those listed on the purchase order. Ensure only personnel who have received Shipping, Receiving, Handling and Storage Training (T2.1) are receiving loads. Review incoming specifications to ensure that the specifications are current for all products received.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

O2 Shipping, Receiving, Handling and Storage

O2.4 Shipping Conditions

What is the standard?

Food, ingredients and packaging materials are protected from contamination, damage and spoilage during shipping.

What are the risks?

If food products are not transported in an appropriately controlled environment, spoilage (e.g. microbial growth, toxin formation) can occur. Damaged product can be contaminated (e.g. foreign material, microorganisms).

How can you meet the standard?

- Ensure that temperatures of conveyance vehicles are appropriate to prevent or minimize food spoilage.
- Ensure that refrigerated conveyance vehicles are equipped with temperature measuring devices to allow temperature monitoring.
- Implement other necessary controls (e.g. humidity) as appropriate to prevent or minimize food spoilage.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.77(1), 133,(1)(2)

Dairy:
Milk Act (Ontario) R.R.O. 1990. O.Reg. 761.s.122(1g)

Other:
Health Protection and Promotion Act (Ontario) O.Reg. 562, s.11; s.28; s.33(2); s.34-35

Are you in conformance?

At pre-determined intervals during receiving and shipping, confirm that transportation conditions are appropriate to prevent or minimize food spoilage. Monitor temperature measuring devices and any other controls designed to prevent or minimize spoilage.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

O2 Shipping, Receiving, Handling and Storage

O2.5 Returned and Defective Food Products

What is the standard?

Returned, defective or suspect food, ingredients and packaging materials are clearly identified, stored and controlled for food safety assessment and disposition.

What are the risks?

Returned product has left the control of the establishment and may have been subjected to improper handling (e.g. temperature abuse, poor storage conditions) causing contamination of the product. Defective or suspect product could also be contaminated. Returned and defective or suspect products that are not controlled can lead to contamination of other products.

How can you meet the standard?

- Identify, isolate and control returned, defective or suspect food products to prevent or minimize re-use or re-shipment before an appropriate examination or evaluation can be performed.
- Designate a separate area within the establishment (e.g. dry storage, cooler, freezer) for the storage of returned and defective or suspect products.
- Ensure designated personnel responsible for examining and assessing returned food products and defective or suspect food products are adequately trained.

Which regulations apply to this standard?

Meat & Poultry:
N/A

Dairy:
Milk Act (Ontario) R.R.O. 1990, O.Reg. 761, s.60; s.62

Other:
N/A

Are you in conformance?

At pre-determined intervals, confirm that returned, defective and suspect products are appropriately identified, isolated and controlled to prevent contamination.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

O2 Shipping, Receiving, Handling and Storage

O2.6 Allergen Control

What is the standard?

The presence of undeclared allergens in food products is prevented through control of the handling, storage and use of allergenic products and the equipment used in their processing. Rework of product(s) containing allergens is controlled. Procedures are in place to ensure that ingredient declarations list any allergens contained in the product.

What are the risks?

Allergens are substances that can cause an allergic response in certain individuals. An allergic response can range from minor skin irritation to anaphylaxis (i.e. severe allergic response). If allergen-containing ingredients and products are not controlled, contamination of non-allergen containing products can occur. A large proportion of food recalls are due to the presence of an allergenic component in a food product that is not declared on the ingredient declaration.

How can you meet the standard?

- Schedule production activities to reduce the potential of allergen cross-contamination.
- Clean and sanitize equipment between processing of allergen-containing products and non-allergen containing products.
- Designate storage and holding areas for ingredients and products that contain allergens.
- Ensure that ingredients or products that contain allergenic components are suitably identified (e.g. colour-coded containers, tags, labels).

Which regulations apply to this standard?

Meat & Poultry:
N/A

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, confirm that handling, storage and use of allergenic ingredients and products (e.g. colour-coded containers are used, allergens are appropriately identified and controlled or separated and production schedule reduces risk of allergen contamination) reduces the potential for allergen cross-contamination.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

What is the standard?

Package design and materials protect the safety and suitability of food and accommodate proper labelling.

What are the risks?

Packaging materials serve an important purpose in protecting food products from the environment. If the type of packaging (i.e. design and materials) is not suitable and adequate for the product and its environment, the product can become contaminated. If packaging materials or gases are toxic, they can compromise the safety and suitability of food. If packaging materials are intended for re-use, they must be of a design and material that permits cleaning and sanitation, where necessary, or cross-contamination can occur.

How can you meet the standard?

- Ensure that packaging materials protect the product against external contamination under the intended conditions of storage and use.
- Ensure that packaging materials, including gases, are non-toxic and do not pose a threat to the safety and suitability of food under the intended conditions of storage and use.
- Use re-usable packaging that is durable and easy to clean and sanitize.
- Ensure that packaging design and materials accommodate proper labelling.
- Ensure that packaging protects the product from damage.
- Ensure that labelling meets the requirements of the *Consumer Packaging and Labelling Act* and the *Food and Drugs Act*.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.115(4), 127, 128, 129(1)(2)(3)

Dairy:
N/A

Other:
Health Protection and Promotion Act (Ontario) O.Reg. 562, s.36; s.59

Are you in conformance?

At pre-determined intervals, review packaging design and materials to ensure they do not compromise food safety and suitability.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

O2 Shipping, Receiving, Handling and Storage

O2.8 Storage Practices

What is the standard?

Food, ingredients and packaging materials are processed, handled and stored in conditions that protect their safety and suitability. Food, ingredients and packaging materials are rotated to protect their safety and suitability.

What are the risks?

If foods are not handled, processed and stored in an appropriately controlled environment, spoilage (i.e. microbial growth, toxin formation) can occur. If ingredient and food containers and packages are not protected during storage, contamination from microorganisms, chemicals and foreign material (e.g. insects, dust, wood chips) can occur. If food and ingredients are not properly rotated, they can reach their expiry date, increasing the risk to consumers. If food, ingredients and packaging materials are not properly stored and rotated, physical contamination of products can occur due to the build-up of dust and debris.

How can you meet the standard?

- To prevent or minimize contamination by microorganisms, chemicals and foreign materials, cover and protect food, ingredients and packaging materials when in storage, during transfer and when cleaning is being performed in the area.
- Store food, ingredients and packaging materials off the floor and away from the surrounding walls to prevent or minimize contamination.
- Establish procedures for the appropriate rotation of food, ingredients and packaging materials (i.e. first in, first out) to prevent or minimize food product contamination, damage or spoilage (e.g. corrosion resulting in leakage, shelf-life expiration).
- Ensure food storage facilities are designed and constructed to:
  - permit adequate maintenance and cleaning;
  - avoid pest access and harbourage; and
  - enable food to be effectively protected from contamination during storage.
- Ensure that temperatures and humidity of storage areas, process areas, coolers and freezers are appropriate to prevent or minimize food spoilage. Temperature control systems must take into account:
  - the nature of the food (e.g. water activity, pH, the initial level and types of microorganisms);
  - the intended shelf-life of the product;
  - the method of packaging and processing; and
  - how the product is intended to be used (e.g. further cooking or processing, ready-to-eat).

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.30(1abc)(4)(5)(6), 51(1)(2)(3)(4)(5), 52(1), 83(1), 96(1)(2)(3), 115(3), 129(4)

Dairy:
Milk Act (Ontario) R.R.O. 1990. O.Reg. 761.s.78(1); s.81(1)(2)

Other:
Health Protection and Promotion Act (Ontario) O.Reg. 562, s.11; s.23; s.26–29; s.37; s.42–46; s.59

Are you in conformance?

At pre-determined intervals, confirm that food, ingredients and packaging materials are properly stored to prevent or minimize contamination, spoilage and damage. Confirm that proper food, ingredient and packaging material rotation procedures are followed.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

At pre-determined intervals, monitor temperature measuring devices in refrigerated rooms to ensure temperatures are appropriate to prevent or minimize food spoilage. Ensure that any other controls designed to prevent or minimize spoilage of food products are functioning properly and as intended.

Record your observations to prove that the monitoring task was completed. Initial and date the record.

O2 Shipping, Receiving, Handling and Storage

O2.9 Chemical Storage

What is the standard?

Non-ingredient chemicals and hazardous substances are stored securely and separately from food, ingredients, packaging materials and food contact surfaces. Potentially hazardous ingredients are stored in a controlled manner that ensures the safety and suitability of food.

What are the risks?

If chemicals and hazardous substances are not stored securely and separately from food, ingredients, packaging materials and food contact surfaces, contamination can occur (e.g. spillage, accidental use, leakage).

How can you meet the standard?

- Securely store chemicals and hazardous substances (i.e. water and boiler treatment chemicals, sanitation chemicals, pesticides, paints, solvents or other chemicals and hazardous substances not meant for use with food or on food contact surfaces) in a designated area to prevent or minimize cross-contamination of food, ingredients, packaging materials and food contact surfaces.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.49(2)

Dairy:
N/A

Other:
Health Protection and Promotion Act (Ontario) O.Reg. 562, s.59; s.63

Are you in conformance?

At pre-determined intervals, confirm that chemicals and hazardous substances are stored securely and separately from food, ingredients and packaging materials to prevent or minimize cross-contamination.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

O2 Shipping, Receiving, Handling and Storage

O2.10 Waste Management

What is the standard?

Waste is handled, stored and removed in a manner that protects the safety and suitability of food.

What are the risks?

If waste is not handled and stored properly, it can contaminate food, ingredients, packaging materials or food contact surfaces (e.g. come into contact with food, harbour pests). If areas within the establishment where waste is stored or removed are not kept in a sanitary manner, personnel or equipment can cause cross-contamination (e.g. brushing against waste, having to move waste out of the way). Accumulated waste on the property surrounding the establishment can harbour pests.

How can you meet the standard?

- Ensure waste does not accumulate in food handling or storage areas or on the property surrounding the establishment.
- Provide adequate and properly protected areas and containers (e.g. containers with lids) for the storage of waste until removal.
- Ensure interior and exterior waste storage areas and containers are adequate for the amount of waste generated and cleaned often enough to avoid creating conditions that can cause cross-contamination or attract pests.
- Remove waste often enough to avoid creating conditions that can cause cross-contamination or harbour pests.
- Ensure waste removal procedures do not cause cross-contamination.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.50(6), 85(1)(2)(3), 86(1)(2)(3)(4), 87(1)(2)(3)(4), 88(1)(2)(3), 89(3), 90(2), 91(1)(2)(3)(4)(5)(6)

Dairy:
N/A

Other:
Health Protection and Promotion Act (Ontario) O.Reg. 562, s.57

Are you in conformance?

At pre-determined intervals, confirm that the handling and storage of waste does not lead to contamination of food, ingredients, packaging materials or food contact surfaces. Confirm that waste storage areas and containers are clean, tidy and adequate for the amount of waste being generated.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

What is the standard?

Cleaning and sanitizing procedures are being performed as written in the Sanitation Program (P3.1) to protect the safety and suitability of food.

What are the risks?

If cleaning and sanitizing procedures are not performed as written in the Sanitation Program (P3.1), improper or inadequate sanitation can result. Inadequate sanitation can lead to contamination of food, ingredients, packaging materials and food contact surfaces. Improper chemical concentrations, application or rinsing procedures can lead to chemical (e.g. chemical residues due to poor rinsing, no-rinse chemicals in excess of approved concentration) and biological contamination (e.g. bacteria not effectively removed from food contact surfaces). Contamination can also be caused by allergens that are not effectively removed from food contact surfaces or by cross-contamination from cleaning activities during operation.

How can you meet the standard?

- Confirm that cleaning and sanitizing procedures are followed as written in the Sanitation Program (P3.1) to ensure that equipment and all parts of the establishment are properly cleaned and sanitized to prevent or minimize contamination.
- Ensure that sanitation personnel are aware of all sanitation procedures necessary to maintain the safety and suitability of food.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, S.45(2), 47(3)(4)(5)(9), 50(1)(2)(3)(4)(7)(8)

Dairy:
Milk Act (Ontario) R.R.O. 1990. O.Reg. 761.s.39; s.41; s.86

Other:
N/A

Are you in conformance?

At pre-determined intervals, observe sanitation activities in progress to ensure that activities are being performed as written in the sanitation manual (e.g. correct sequence of steps and chemicals; correct water temperature, volume and pressure). Ensure that sanitation activities are effective by performing an inspection or effectiveness test (e.g. swab). Ensure that all personnel performing sanitation activities have completed the Sanitation Training (T3.1).

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

What is the standard?

Operations begin only after a pre-operational assessment to evaluate the suitability of the environment for food processing and handling has been completed with satisfactory results. When sanitation activities are required during operations, a pre-operational assessment is conducted before resuming operations.

What are the risks?

If a pre-operational inspection is not performed before operations begin, inadequate or improper sanitation may not be detected. Inadequate sanitation can lead to contamination of food, ingredients, packaging materials and food contact surfaces. Improper chemical concentrations, application or rinsing procedures can lead to both chemical (e.g. chemical residues due to poor rinsing, no-rinse chemicals in excess of approved concentration) and biological contamination (e.g. bacteria not effectively removed from food contact surfaces). Contamination can also be caused by allergens that are not effectively removed from food contact surfaces or by cross-contamination from cleaning activities during operation.

How can you meet the standard?

- Ensure designated personnel follow inspection procedures set out in the written sanitation program for inspection of equipment and rooms prior to commencement of operations and where applicable, before resuming operations. Inspection procedures confirm that equipment and rooms are visibly clean (i.e. free of food, residues, filth) and, where appropriate, sanitized.
- Consider including pest control, temperature control and equipment maintenance in your pre-operational assessment.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.47(6)(7)(8)(9), 51(1)

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, confirm that pre-operational inspections are being performed as required. Ensure that all personnel performing pre-operational inspections have completed the Sanitation Training (T3.1).

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

O4 Equipment Maintenance

O4.1 Preventive Maintenance and Calibration Monitoring

What is the standard?

Preventive maintenance and calibration procedures are performed as written in the Preventive Maintenance Calibration Program (P4.1) to protect the safety and suitability of food.

What are the risks?

If preventive maintenance and calibration procedures are not performed as written in the Preventive Maintenance and Calibration Program (P4.1), food, ingredients and packaging materials can be contaminated. Deteriorating or poorly maintained equipment (e.g. pitted, cracked) can present physical hazards (e.g. flaking metal, nuts, bolts) or provide areas for bacterial growth. Over-lubrication of equipment can cause chemical contamination. Equipment and devices used to measure parameters that have an impact on food safety must be properly calibrated. If equipment and measuring devices used to monitor critical steps in the manufacturing process (e.g. pH, water activity, cooking temperature, concentration of restricted ingredients, metal detection) are not accurate, food safety hazards can result (e.g. inaccurate thermometers will result in a bacterial hazard).

How can you meet the standard?

- Perform preventive maintenance and calibration procedures as written in the Preventive Maintenance and Calibration Program (P4.1).
- Ensure preventive maintenance and calibration personnel receive the training necessary to protect the safety and suitability of food.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.30(5)(6), 45(1), 46(3)(4)(5)(6), 99(4)

Dairy:
N/A

Other:
Health Protection and Promotion Act (Ontario) O.Reg. 562, s.49

Are you in conformance?

At pre-determined intervals, ensure that preventive maintenance and calibration procedures are performed as written in the Preventive Maintenance and Calibration Program (P4.1). Ensure preventive maintenance and calibration procedures are only performed by personnel who have received Preventive Maintenance and Calibration Training (T4.1).

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

O5 Pest Control | O5.1 Pest Control Monitoring

What is the standard?

Pest control procedures are performed as written in the Pest Control Program (P5.1) to protect the safety and suitability of food.

What are the risks?

If pest control procedures are not performed as written in the Pest Control Program (P5.1), pests can contaminate food, ingredients, packaging materials and food contact surfaces. Pests in or around an establishment can lead to contamination from droppings, larvae and dead insects or animals or their parts.

How can you meet the standard?

- Pest control activities are followed as written in the Pest Control Program (P5.1) to ensure that all parts of the establishment are free of pests.
- Pest control personnel are aware of all pest control procedures (e.g. licensed to handle and apply pesticides) necessary to maintain the safety and suitability of food.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.48(3)(4)(5)(6)

Dairy:
Milk Act (Ontario) R.R.O. 1990. O.Reg. 761.s.77(1f)

Other:
N/A

Are you in conformance?

At pre-determined intervals, ensure that pest control activities are being performed as written in the pest control manual (e.g. correct pesticides used, traps properly serviced). Ensure only personnel who meet the requirements of the Pest Control Training (T5.1) are performing pest control activities.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

O6 Recall | O6.1 Product Code/Labelling Monitoring

What is the standard?

Food products stored within or shipped from the establishment are correctly labelled and coded with a lot code or production identifier.

What are the risks?

Control of labelling is important to ensure that the correct label is applied to each food product. Incorrect labels could be misleading and cause potential health hazards to consumers who are allergic to ingredients within the mislabelled food product. Incorrectly coded expiry dates can result in consumers storing the product past the intended shelf life, leading to potential spoilage. Incorrect labelling or coding can make product recall difficult or unfeasible if a hazard is associated with the mislabelled or miscoded product.

How can you meet the standard?

- Ensure all products are labelled correctly and the label accurately represents the product packaged (e g. includes declaration of all ingredients, contains all information as required by the *Consumer Packaging and Labelling Act* and regulations).
- Ensure food products are accompanied by, or bear, adequate information and instructions to enable the next person in the food supply chain to handle, display, store, prepare and use the product safely and correctly.
- Implement procedures to ensure proper label use (e.g. tops and bottoms of label bundles are visually checked before use).
- Implement a system of identification and storage of different label types.
- Ensure all finished products are correctly coded (e.g. including production date, expiry date, lot).
- Create a description of lot code and production identifiers and include it in the Recall Program described in P6.1.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.99(4de)115(1)(2), 116(1)(2)(3), 117(1)(2)(3), 118(1)(2)(3)(4)(5)(6), 119 (1)(2)(3)(4), 120(1)(2)(3), 121, 122(1)(2), 123(1)(2), 124(1)(2)(3)(4)(4), 137(2)(3)

Dairy:
Milk Act (Ontario) R.R.O. 1990. O.Reg. 761.s.127(2), O.Reg. 753.s.9

Other:
Health Protection and Promotion Act (Ontario) O.Reg. 562, s.36; s.40; s.52

Are you in conformance?

At pre-determined intervals, observe labelling and coding activities to ensure that the product is being properly labelled and coded. Ensure recall personnel have received Recall Training (T6.1).

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

O6 Recall | O6.2 Mock Recalls

What is the standard?

Written recall procedures are tested by conducting mock recalls as outlined in the written Recall Program (P6.1). Mock recalls are effective in determining where a particular product lot/shipment is within a specified time frame. Mock recalls are conducted by trained personnel at a frequency adequate enough to ensure the recall system is up to date and functioning properly.

What are the risks?

Food recalls can be triggered by a number of hazards within or external to a facility. Quickly re-gaining control of implicated lots of product is crucial in preventing or minimizing the risk of the hazard to consumers.

How can you meet the standard?

- Establish a frequency to test recall procedures.
- Perform mock recalls following the written recall plan outlined in P6.1 Recall Program.
- Choose products for mock recalls carefully to ensure that the recall system is fully tested.
- Ensure mock recall is continued until the entire lot/shipment is located
- Establish a responsible authority to oversee recall procedures.
- Maintain a list of customer contact information to aid in mock recall processes.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.137(2)(3)

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, check mock recall records to ensure mock recall frequency is being met and all mock recalls are completed correctly. Ensure recall ersonnel have received Recall Training (T6.1).

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

O7 Water Safety | O7.1 Water Treatment Monitoring

What is the standard?

Water treatment activities are performed as written in the Water Treatment Program (P7.1) to protect the safety and suitability of food.

What are the risks?

If water treatment activities are not performed as written in the Water Treatment Program (P7.1), the water supply can become contaminated (e.g. presence of microorganisms, excess chemical levels). Since water, ice and steam can be used for a variety of purposes (e.g. sanitation, hand washing, ingredient, processing aid), non-potable water can transfer contaminants (e.g. *E. coli*) to food, ingredients, food contact surfaces and personnel. Treated water (e.g. boiler water, chlorinated water, flume water) can present a source of contaminants if the chemical treatment or treatment process is incorrectly performed.

How can you meet the standard?

- Perform water treatment activities as written in the Water Treatment Program (P7.1) to ensure that establishment water supply is potable and free of contaminants.
- Ensure water treatment personnel are capable of performing the necessary activities.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.35(1)

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, ensure that water treatment activities are being performed as written in the Water Treatment Program (P7.1) (e.g. proper chemicals used, correct frequency of treatment). Ensure water treatment personnel have received Water Treatment Training (T7.1).

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

What is the standard?

Water safety monitoring activities are performed as written in the Water Safety Monitoring Program (P7.2) to protect the safety and suitability of food.

What are the risks?

If water safety monitoring activities are not performed as written in the Water Safety Monitoring Program (P7.2) contaminants may not be detected. Since water, ice and steam can be used for a variety of purposes (e.g. sanitation, hand washing, ingredient, processing aid), non-potable water can transfer contaminants (e.g. *E. coli*) to food, ingredients, food contact surfaces and personnel. Treated water (e.g. boiler water, chlorinated water, flume water) can present a source of contaminants if the chemical treatment or treatment process is incorrectly performed.

How can you meet the standard?

- Ensure that water safety monitoring activities are followed as written in the Water Safety Monitoring Program (P7.2) to ensure that the establishment water supply is potable and free of contaminants.
- Ensure that personnel responsible for the delivery of the Water Safety Monitoring Program (P7.2) have been adequately trained.
- Ensure that sampling and testing personnel are capable of performing the necessary activities.

Which regulations apply to this standard?

Food Safety and Quality Act, 2001 O.Reg. 31/05, s.37(1)(2), 39, 41(1), 99(1)(4)

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, confirm that water saftey monitoring activities are being performed as written in the Water Safety Monitoring Program (P7.2) (e.g. results are reviewed to ensure that the water source continues to be potable, proper sample sites tested). Ensure water safety monitoring personnel have received Water Safety Monitoring Training (T7.2).

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

Environmental Controls

E1 Establishment Location and Construction

63 E1.1 Property and Surroundings

64 E1.2 Building Exterior

E2 Establishment Design

65 E2.1 Cross-contamination Control

66 E2.2 Personnel Facilities

E3 Establishment Interior

67 E3.1 Internal Structures and Fittings

68 E3.2 Lighting

69 E3.3 Lighting Fixtures

70 E3.4 Air Quality and Ventilation

71 E3.5 Drainage and Sewage Systems

E4 Equipment

72 E4.1 Equipment Design, Construction and Installation

73 E4.2 Waste Containers and Utensils

74 E4.3 Hand-washing Stations

E5 Water Supply

75 E5.1 Adequate Supply and Protection of Water, Ice and Steam

E1 Establishment Location and Construction

E1.1 Property and Surroundings

What is the standard?

The establishment is located away from or protected against potential sources of external contaminants that may compromise the safety and suitability of food. Areas surrounding the establishment are maintained to prevent or minimize harbourage of pests and contaminants.

What are the risks?

Outside sources of contamination (e.g. excessive dust, foul odours, smoke, pest infestations, airborne microbial and chemical contaminants) can lead to contamination within an establishment. Water that accumulates around the establishment provides an ideal environment for growth of microorganisms.

How can you meet the standard?

- Locate the establishment in an area that is free from sources of external contaminants that may impact on food safety or suitability (e.g. airborne contaminants), or put sufficient controls in place and maintain them. In particular, locate the establishment away from, or protect it against:
  - environmentally polluted areas and industrial activities that pose a serious threat of contaminating food;
  - areas subject to flooding unless sufficient safeguards are provided;
  - areas prone to infestations of pests; and
  - areas where wastes, either solid or liquid, cannot be removed effectively.
- Take reasonable measures to protect food, ingredients, packaging materials and food contact surfaces from external contaminants.
- Store waste and garbage outside in a manner, and remove at intervals, that minimizes potential for contamination and harbourage of pests (e.g. pest-proof containers).
- Do not store equipment and other items on the property surrounding the establishment unless controls are in place to allow for adequate property maintenance (e.g. designated storage location, property maintenance activity schedule).
- Ensure establishment surroundings and property are neat, tidy and well-kept (e.g. shrubs are pruned, litter is removed).
- Ensure establishment surroundings and property are provided with adequate drainage to prevent or minimize pooling water.
- Store potential food sources for pests in pest-proof containers or stack them above the ground away from walls.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, S.14(1bcd)(2ab)

Dairy:
Milk Act (Ontario) R.R.O. 1990. O.Reg. 761.s.97(1)

Other:
Health Protection and Promotion Act (Ontario) O.Reg. 562, s.11

Are you in conformance?

At pre-determined intervals, confirm that the establishment is protected from potential sources of external contaminants that could pose a threat o food safety or suitability (e.g. the property surrounding the establishment is free from pooling water, no pest harbourage, free of litter).

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

E1 Establishment Location and Construction

E1.2 Building Exterior

What is the standard?

Establishment exterior is structurally complete and suitable for the operations taking place within. Establishment exterior is protected against entry or harbourage of pests as well as entry of external contaminants.

What are the risks?

If an establishment is constructed of materials that are not durable and suitable for establishment operations, contaminants can enter into the establishment. Inadequate or poor establishment conditions can create the potential for hazards that compromise activities performed in the establishment (e.g. damaged roof can lead to entry of rainwater or pests).

How can you meet the standard?

- Design and construct the establishment so that the internal environment is protected from external contaminants.
- Ensure the establishment (e.g. walls, roof) is of a sound construction and is maintained in good repair (e.g. no evidence of damage).
- Take steps to prevent or minimize the entrance and harbourage of pests, insects and contaminants (e.g. no holes or unprotected openings, weather stripping on exterior doors).
- Cover air intakes and openings or equip them with appropriate screens.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.15(1f)(5)

Dairy:
Milk Act (Ontario) R.R.O. 1990. O.Reg. 761.s.77(1)

Other:
Health Protection and Promotion Act (Ontario) O.Reg. 562, s.11

Are you in conformance?

At pre-determined intervals, check the establishment exterior for conditions that may lead to contamination of food, ingredients, packaging materials or food contact surfaces.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

What is the standard?

Establishment design or operational controls permit hygienic activities, including protection against cross-contamination of food, ingredients, packaging materials and food contact surfaces.

What are the risks?

If an establishment lacks adequate separation between incompatible activities, cross-contamination can occur. Inadequate separation can lead to microbiological contamination (e.g. ready-to-eat product contaminated by raw product, finished product contaminated by waste) or chemical contamination (e.g. allergens).

How can you meet the standard?

- Separate operations that have the potential to cause cross-contamination by physical partition, by work area designation, by designated equipment or by other effective means.
- Develop a drawing or blueprint that identifies the activities performed in each area (e.g. cooler room, equipment wash-up room, raw preparation room). Include traffic patterns of personnel, food, ingredients, packaging materials, chemicals and waste material.
- Identify areas where cross-contamination may occur (e.g. unclean raw vegetables versus processed vegetables, cooked foods versus raw foods, edible food versus waste) and establish controls (e.g. physical separation or operational separation) where necessary to prevent or minimize cross-contamination.
- Locate personnel facilities to prevent or minimize contamination of food processing and handling areas.
- Construct or designate appropriate areas of the establishment to be used solely for production of certain product types (e.g. raw, cooked, allergenic products) or certain activities (e.g. cleaning of utensils).
- Schedule production activities to prevent or minimize the potential for cross-contamination (e.g. raw product following cooked product, allergenic products following non-allergenic products).

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.15(1acd)(2)(3)(4), 20(1)(2)(3), 20.1, 22(1)(2)(3)(4), 24(2), 25(2), 26(2), 29(1), 30(1d)(2)(3), 42, 43, 50(5)

Dairy:
Milk Act (Ontario) R.R.O. 1990. O.Reg. 761.s.77(1)

Other:
Health Protection and Promotion Act (Ontario) O.Reg. 562, s.11; s.26–28

Are you in conformance?

At pre-determined intervals, confirm that operations having the potential to cause cross-contamination are physically segregated, separated by operational controls or other effective means.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

What is the standard?

Washrooms, change rooms and lunch and break area(s) are provided and maintained to ensure that personal hygiene can be maintained to protect the safety and suitability of food. Washrooms are equipped with adequate lighting and an adequate number of flush toilets and hand-washing stations; are free of condensation, excess moisture or odours; and are designed to prevent or minimize contamination.

What are the risks?

If adequate washrooms, change rooms and lunchrooms are not available, then contamination can occur. Inadequate washroom facilities can lead to microbial contamination due to poor personal hygiene. Lack of an acceptable area to change into work clothes will allow exterior contaminants to enter the establishment (e.g. microorganisms on street clothes). Eating or drinking in production areas can lead to contamination from the product being consumed. Poor maintenance of washrooms, change rooms and lunchrooms can lead to contaminants entering production and storage areas.

How can you meet the standard?

- Ensure establishment is provided with washrooms, change rooms, lunchrooms and other necessary personal welfare areas, adequate for the number of personnel and their activities.
- Provide enough flush toilets and hand-washing stations to accommodate the number of personnel working at the establishment.
- Equip washrooms with lighting to facilitate sanitary procedures and ventilation to effectively remove odours.
- Ensure washrooms, change rooms and lunchrooms are designed and maintained in good repair to prevent or minimize contamination of food, ingredients, packaging material or food contact surfaces.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.27(2)(3ab)(4)(6)(7), 28(1)(2)(3)

Dairy:
N/A

Other:
Health Protection and Promotion Act (Ontario) O.Reg. 562, s.68; s.69

Are you in conformance?

At pre-determined intervals, confirm washrooms, change rooms and lunchrooms are adequate for the number of personnel, properly equipped and maintained in good repair.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

What is the standard?

Internal rooms, structures and fittings are suitable and are maintained for the operations taking place within. Floors, walls, ceilings, overheads, doors, windows, stairs and other structures are cleanable, properly maintained, exhibit no evidence of degradation that would cause contamination and are suitable for the activities in each area. The condition of internal rooms, structures and fittings protects the safety and suitability of food.

What are the risks?

Materials with the potential to cause biological, chemical or physical hazards should not be used in the construction of the inside of the establishment. Materials that cannot be effectively cleaned can contribute to the development of unsanitary conditions (e.g. presence of microorganisms, mould). Materials that are not durable or suitable for the conditions or activities in the area can deteriorate resulting in unsuitable conditions (e.g. flaking, peeling, rust, loose materials).

How can you meet the standard?

- Ensure internal structures, surfaces and fittings (e.g. ceilings, door, walls) are of a construction and condition that does not present biological, chemical or physical hazards to food, ingredients, packaging materials or food contact surfaces (e.g. no flaking paint, rust, corrosion, accumulation of food residue, dust, mould).
- Ensure internal structures, surfaces and fittings (e.g. ceilings, doors, walls) can be cleaned and, where appropriate, sanitized.
- In particular, ensure the interior of the establishment meets the following conditions where necessary to protect the safety and suitability of food:
  - the surfaces of walls, partitions and floors are made of materials that do not have a toxic effect when used as intended;
  - walls and partitions have a smooth surface;
  - floors are constructed to allow adequate draining and cleaning;
  - ceilings and overhead fixtures are constructed and finished to minimize the build-up of dirt, condensation and the shedding of particles;
  - windows are easy to clean and constructed to minimize the build-up of dirt;
  - where necessary, windows are fixed in place;
  - doors have smooth, non-absorbent surfaces, are easy to clean and sanitize;
  - working surfaces that come into direct contact with food are in a sound condition, and are easy to clean, maintain and sanitize; and
  - working surfaces that come in direct contact with food are made of smooth, non-absorbent materials, and are inert to food, detergents and sanitizers under normal operating conditions.
- Windows are sealed or equipped with close-fitting, cleanable screens to prevent or minimize the entry of pests.
- Windows are protected or constructed of unbreakable materials in areas where breakage can contaminate food, ingredients, packaging materials and food contact surfaces.
- Doors are constructed to prevent or minimize the entry of pests (e.g. self-closing).
- Internal structures are constructed of materials listed in the "Reference Listing of Accepted Construction Materials, Packaging Materials and Non-Food Chemical Products," published by the Canadian Food Inspection Agency, or the manufacturer has a letter of no objection from Health Canada.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.16(1)(2)(3), 17(2b), 49(1)

Dairy:
Milk Act (Ontario) R.R.O. 1990. O.Reg. 761.s.77(1)

Other:
Health Protection and Promotion Act (Ontario) O.Reg. 562, s.11; s.22; s.23; s.59

Are you in conformance?

At pre-determined intervals, confirm that materials used in the construction of the interior of the establishment (e.g. floors, walls, ceilings, overhead structures, windows, doors, stairs) do not present a source of contaminants, are in a good state of repair and are cleanable and suitable for the activity of the room.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

What is the standard?

The establishment has appropriate lighting to facilitate all activities including processing, inspection, cleaning and sanitizing, and maintenance. Lighting is of a design and type that does not contribute to a misleading assessment of food.

What are the risks?

If lighting levels are not adequate for the inspection of food or if the light source changes the natural colour of food, then an incorrect assessment of the appearance of the food may result. If lighting levels are not adequate to perform required tasks (e.g. cleaning and maintenance of equipment), this can create the potential for biological, chemical or physical contamination.

How can you meet the standard?

- Ensure lighting levels are adequate to properly complete the tasks performed in each area (e.g. product inspection, sanitation, maintenance, visual examination of rooms).
- Ensure light sources do not alter the natural colour or appearance of food where food assessments are performed.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.17(1ab)

Dairy:
N/A

Other:
Health Protection and Promotion Act (Ontario) O.Reg. 562, s.13

Are you in conformance?

At pre-determined intervals, confirm that lighting levels are of an adequate intensity for the tasks performed in each area. Confirm that lighting does not alter the natural colour of food where an assessment is necessary.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

What is the standard?

Light bulbs and lighting fixtures in areas of exposed food, ingredients, packaging materials or food contact surfaces are equipped with shatterproof bulbs or breakage shields to prevent or minimize contamination of food if breakage occurs.

What are the risks?

If a light bulb or lighting fixture breaks over exposed food, ingredients, packaging materials or food contact surfaces, then a physical hazard can occur.

How can you meet the standard?

- Equip light fixtures and light bulbs suspended over food, ingredients, packaging materials and food contact surfaces with shatterproof bulbs or coverings to prevent or minimize physical contamination in case of breakage.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.17(2a)

Dairy:
Milk Act (Ontario) R.R.O. 1990. O.Reg. 761.s.77(1)

Other:
Health Protection and Promotion Act (Ontario) O.Reg. 562, s.11; s.26

Are you in conformance?

At pre-determined intervals, confirm that light bulbs and lighting fixtures are protected in areas of exposed food, ingredients, packaging materials and food contact surfaces. Confirm that the light bulbs and fixtures continue to be in a good state of repair.

Record your observations to prove that the monitoring task was completed. Initial and date the record.

What is the standard?

The establishment has and uses ventilation to keep rooms free of excessive heat, humidity, steam, vapours, smoke, particulates and condensation. Ventilation openings have screens or filters that can be easily cleaned or changed. Ventilation systems do not permit air to flow from contaminated areas to clean areas.

What are the risks?

Unclean air (e.g. containing bacteria, dust, odours, condensation) supplied to the establishment is a potential source of contaminants. Inadequate ventilation may lead to the formation of condensation, which can be a source of bacterial contaminants. The flow of contaminated air through an establishment can also be a source of bacterial contaminants.

How can you meet the standard?

- Ensure the establishment is provided with adequate ventilation to enable sufficient air exchange to maintain a clean air supply and remove contaminated air. In particular, adequate natural or mechanical ventilation is provided to:
  - minimize airborne contamination of food (e.g. from aerosols or condensation droplets);
  - control ambient temperatures;
  - control odours which might affect the suitability of food; and
  - control humidity, where necessary, to ensure the safety and suitability of food.
- Install and maintain equipment requiring ventilation in a manner that ensures removal of humidity, steam vapours, smoke and odours.
- Design and construct ventilation systems so that air does not flow from contaminated areas to clean areas.
- Ensure that the ventilation system can be maintained and cleaned where necessary.
- Ensure that filters and similar devices are easily removed for cleaning and replacement or designed to be cleaned in place.
- Change or clean filters and similar devices often enough to maintain a clean air supply.
- Ensure that the establishment's air supply minimizes airborne contaminants.
- Where necessary, exhaust equipment to the outside to prevent excessive condensation.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.18(1)

Dairy:
Milk Act (Ontario) R.R.O. 1990. O.Reg. 761.s.77(1)

Other:
Health Protection and Promotion Act (Ontario) O.Reg. 562, s.11; s.15

Are you in conformance?

At pre-determined intervals, confirm that the ventilation system is adequate for the activities within the establishment.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

What is the standard?

The establishment has and uses drainage and liquid waste disposal systems that are maintained to protect the safety and suitability of food and the potable water supply. Drainage and liquid disposal systems are equipped with back-flow preventers and no cross-connections exist with drainage or waste systems and potable water lines. Pooling of water and liquids is prevented or addressed.

What are the risks?

Inadequate drainage or liquid waste disposal systems can lead to cross-contamination of food, ingredients, packaging materials, food contact surfaces or the potable water supply (e.g. drain back-ups leading to flooding). Without mechanisms to prevent backflow (e.g. trapping, venting), sewer gases, pests, microorganisms or other contaminants can enter the establishment through the plumbing. Contamination of floor drains increases the possibility of contamination of the establishment interior. Pooling liquid waste provides an excellent environment for the growth of microorganisms, which can be transferred through the establishment (e.g. on boots, equipment, hoses). Cross-connections between potable and non-potable plumbing systems can contaminate the potable water supply.

How can you meet the standard?

- Design the drainage or liquid waste disposal system in the establishment to prevent cross-contamination of food, ingredients, packaging materials, food contact surfaces or the potable water supply.
- Equip drainage and liquid waste disposal systems with appropriate mechanisms to prevent back-flow.
- Ensure that there are no cross-connections between potable and non-potable water supplies.
- Ensure that drainage or operational controls (e.g. mopping) are adequate to prevent or address pooling liquids on floors.
- Ensure that drains, drain covers and drain traps are cleaned and sanitized regularly.
- Control effluent and sewage lines passing directly over or through production areas to prevent contamination.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O. Reg. 31/05, s.18(1)(3), 19(1)(2)(3)(4)(5)

Dairy:
Milk Act (Ontario) R.R.O. 1990. O.Reg. 761.s.77(1); s.97(2)

Other:
Health Protection and Promotion Act (Ontario) O.Reg. 562, s.11; s.57

Are you in conformance?

At pre-determined intervals, confirm that the drainage and liquid waste disposal systems do not present a source of contaminants to food, ingredients, packaging materials, food contact surfaces or the potable water supply (e.g. liquids are not accumulating, back-flow preventers are operating effectively). Confirm that plumbing lines that pass directly over or through production and storage areas are maintained or controlled to prevent contamination.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

E4 Equipment | E4.1 Equipment Design, Construction and Installation

What is the standard?

Equipment and utensils that may impact on food safety are constructed of non-toxic materials, exhibit no signs of degradation that could contaminate food, and are easy to clean, sanitize and maintain. Equipment design, location, construction and installation promote effective assessment, maintenance, and cleaning and sanitizing activities. Adequate equipment or facilities are available for the activities conducted to protect the safety and suitability of food. Equipment functions in accordance with its intended use.

What are the risks?

Poorly constructed or maintained equipment can create the potential for biological, chemical and physical hazards. Pits, cracks and crevices can provide areas for residues to accumulate and microorganisms to grow. Food residues that accumulate can contain allergenic components that can cause cross-contamination. Poorly constructed or maintained equipment can contaminate food products with physical hazards (e.g. metal fragments). Poor installation of equipment can lead to parts or areas that cannot be properly cleaned, sanitized or inspected. Equipment that cannot be adequately inspected can lead to hazards not being detected. Equipment food contact surfaces that are not suitable for the activities being performed can impart hazards to the products (e.g. chemical leaching from plastics, lead). Equipment that does not function as intended can produce an unsafe product (e.g. inadequate heat treatment).

How can you meet the standard?

- Use equipment designed and constructed in a manner that will not pose biological, chemical or physical hazards to food, ingredients or packaging materials.
- Use equipment constructed to be easily cleaned, sanitized and inspected (e.g. no pits, crevices, poor welds).
- Use equipment designed and installed to achieve the intended purpose and ensure food safety and suitability (e.g. having the equipment properly mounted or ensuring it is vented or drained, having back-flow preventers or conducting a heat distribution test).
- Ensure equipment and facilities are adequate for the activities conducted (e.g. heating, cooling, cooking, refrigerating or freezing the volume of product handled).
- Ensure suitable detection or screening devices are in place where necessary.
- Install equipment in a manner that facilitates cleaning, inspection and maintenance.
- Ensure food contact surfaces are made of smooth, non-absorbent materials, and are inert to food, detergents and sanitizers under normal operating conditions.
- Design equipment that may impact on food safety to allow monitoring and control of parameters such as temperature, humidity, air flow and any other characteristics likely to have an effect on the safety and suitability of food. These requirements are intended to ensure that:
  - harmful or undesirable microorganisms and their toxins are eliminated or reduced to safe levels or their survival and growth are effectively controlled;
  - where appropriate, critical limits established in HACCP plans can be monitored; and
  - temperature and other conditions necessary to food safety and suitability can be rapidly achieved and maintained.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.23(1)(2)(3), 24(1), 25(1), 26(1), 31(1)(2)(3)(4)(5), 32(2)

Dairy:
Milk Act (Ontario) R.R.O.1990, O.Reg.761, s.40; s.79(1),(2),(3)

Other:
Health Protection and Promotion Act (Ontario) O.Reg. 562, s.11; s.18; s.19; s.24; s.29; s.56; s.58; s.69

Are you in conformance?

At pre-determined intervals, inspect all equipment to ensure that it does not present a hazard to food and that surfaces can be cleaned, sanitized, inspected and maintained.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

E4 Equipment | E4.2 Waste Containers and Utensils

What is the standard?

Containers and utensils used for collection and holding of waste and inedible or hazardous substances are clearly identified, function properly, exhibit no signs of degradation that could led to the contamination of food and can be cleaned and maintained. Containers and utensils are cleaned prior to entering food processing, handling or storage areas.

What are the risks?

If containers and utensils used for waste materials are not clearly identified, this can result in container misuse (e.g. edible food products being held in a garbage container), and cause cross-contamination. If containers and utensils used for waste storage and handling are not designed and constructed to prevent or minimize contamination (e.g. prevent leakage), waste can leak or fall out and contaminate food products (e.g. via personnel or equipment). If containers and utensils used for waste are not of a design and construction that allows for cleaning, then they can be a source of contaminants when returned to food processing or storage areas.

How can you meet the standard?

- Clearly identify containers and utensils used for collection and holding of waste (e.g. colour code designations, legible marking).
- Ensure containers and utensils used for the collection and holding of waste are constructed of materials that are cleanable, suitable and maintained for the intended purpose.
- Ensure that, where appropriate, containers are made of durable material, are leak-proof and do not present a source of contaminants to food, ingredients, packaging materials or food contact surfaces.
- Use containers and utensils that allow for cleaning and maintenance.
- Ensure waste containers are protected to prevent or minimize contamination of food handling and storage areas (e.g. equipment with lids, protected to prevent spillage, adequate size).
- Ensure containers and utensils used for waste are cleaned before they are moved into handling or storage areas.
- Where appropriate, use lockable containers to prevent malicious or accidental contamination of food.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.50(6)

Dairy:
N/A

Other:
Health Protection and Promotion Act (Ontario) O.Reg. 562, s.20; s.57

Are you in conformance?

At pre-determined intervals, confirm that containers and utensils used for waste do not present a source of contaminants to food, ingredients, packaging materials or food contact surfaces (e.g. clearly identified, sound condition, cleaned as needed).

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

E4 Equipment | E4.3 Hand-washing Stations

What is the standard?

An adequate number of conveniently located and readily accessible hand-washing stations are provided in areas where exposed food, ingredients and packaging materials are processed or handled, and in washrooms and other locations necessary to prevent or minimize contamination. Hand-washing stations are properly installed and maintained and are provided with warm potable water, soap, a hygienic drying apparatus and a cleanable waste receptacle.

What are the risks?

Personnel are a major source of contaminants. Adequate and frequent washing has been shown to reduce the level of microorganisms on personnel and the products they handle. If there are not enough hand-washing stations or they are located in areas that are difficult to access, personnel are less likely to wash their hands. If hand-washing stations are not provided with adequate supplies, hand-washing activities may not be effective. Hand-washing stations can become a source of contaminants if they are not properly constructed and maintained (e.g. hands-free, used only for hand-washing purposes, cleaned).

How can you meet the standard?

- Provide areas where food is processed or handled with an adequate number of conveniently located hand-washing stations for the number of personnel and the activities performed.
- Ensure washrooms have an adequate number of hand-washing stations for the number of personnel.
- Ensure hand-washing stations do not present a source of contaminants to personnel (e.g. are hands-free).
- Provide hand-washing stations with:
  - soap;
  - warm potable water;
  - hygienic drying apparatus; and
  - durable and cleanable waste receptacles.
- Ensure hand-washing stations are not used for any purpose other than hand washing (e.g. washing of utensils).
- Where appropriate, provide facilities for hand disinfection.

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.27(2)(3cd)

Dairy:
Milk Act (Ontario) R.R.O. 1990. O.Reg. 761.s.78(1)

Other:
Health Protection and Promotion Act (Ontario) O.Reg. 562, s.20; s.68

Are you in conformance?

At pre-determined intervals, confirm that there are an adequate number of conveniently located hand-washing stations for the number of personnel and the activities performed. Confirm that hand-washing stations are provided with warm potable water, soap, and a hygenic drying apparatus and a cleanable waste receptacle. Confirm that hand-washing stations do not present a source of contamination and are used only for the intended purpose.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

E5 Water Supply

E5.1 Adequate Supply and Protection of Water, Ice and Steam

What is the standard?

Potable water, ice and steam are supplied at volumes, pressures and temperatures necessary for all sanitation and operational activities. Appropriate facilities for ice and water storage, treatment, distribution and temperature control are available to protect the safety and suitability of food.

What are the risks?

If water, ice and steam are not supplied at the necessary volumes, pressures and temperatures, the ability to properly complete certain activities can be compromised (e.g. hand washing, sanitation, product rinsing). A lack of sufficient volumes, pressures or temperatures can lead to contamination. If water and ice are not stored under conditions that protect them from contamination, contamination may occur.

How can you meet the standard?

- Ensure that the necessary volumes, pressures and temperatures of water, ice and steam are provided for all sanitation and operational activities including:
  - chemical mixing and application;
  - hand-washing activities;
  - processing (product rinsing);
  - equipment rinsing; and
  - use as an ingredient.
- Ensure water, ice and steam used either directly or in-directly for food processing, sanitation and any personnel welfare activities is potable.
- Ensure that non-potable water (e.g. for use in fire control) has a separate storage and distribution system.
- Ensure that non-potable water systems are identified and do not connect with, or allow reflux into, potable water systems (e.g. vacuum breaks, back-flow preventers).

Which regulations apply to this standard?

Meat & Poultry:
Food Safety and Quality Act, 2001 O.Reg. 31/05, s.26(1), 32(1), 33, 34(1bcd)(2cde)(3c)(4ab)

Dairy:
Milk Act (Ontario) R.R.O. 1990. O.Reg. 761.s.78(1)

Other:
Health Protection and Promotion Act (Ontario) O.Reg. 562, s.20; s.31

Are you in conformance?

At pre-determined intervals, confirm that the necessary volumes, pressures and temperatures of water, ice and steam for all sanitation and operational activities are provided.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

HACCP Advantage

79 *HACCP Advantage* Introduction
81 Form #1: Product Description
82 Form #2: Ingredients and Incoming Materials
83 Form #3: Flow Diagram
84 Form #4: Plant Schematic
85 Form #5: Hazard Description and Critical Control Point Determination
88 Form #6: Flow Diagram with Critical Control Points
89 Form #7: Uncontrolled Hazards
90 Form #8: HACCP Matrix

Welcome to *HACCP Advantage*

HACCP Advantage is the second step in the *HACCP Advantage* series of programs. As outlined in the Introduction to this manual, *HACCP Advantage* includes all the requirements of the *GMP Advantage* program. The *GMP Advantage* program should be functioning effectively before any *HACCP Advantage* plans are implemented.

This section of the *HACCP Advantage* Program Manual contains the HACCP plan forms which are used to determine controls for hazards associated with specific food and ingredients or a specific manufacturing process.

The HACCP plan forms meet the seven HACCP principles as outlined by the Codex Alimentarius Commission (see the *HACCP Advantage* Guidebook for more explanation of these principles). Completing these forms will require a comprehensive knowledge of your manufacturing facility as well as the ingredients and products processed within the facility.

These HACCP forms will generate Critical Control Points (CCPs) – the points where important hazards can be controlled – and identify the food safety controls needed to eliminate, prevent, or reduce the hazards to an acceptable level. The HACCP plan forms will also guide you through the identification and implementation of monitoring, corrective action, verification and record-keeping procedures.

The *HACCP Advantage* Guidebook will provide you with more specific guidance, along with examples of completed HACCP plan forms and implemented CCPs, to help with the implementation of the *HACCP Advantage* program.

What's New in Version 2.0?

Version 2.0 of the HACCP plan forms contains only three very minor modifications to the forms in the original *HACCP Advantage* Program Manual.

- Form #1 now asks users to ensure that their finished product, as well as the product recipe, meets the requirements of the federal *Food and Drugs Act*.
- Form #2 has been simplified and shortened by combining the hazard identification for ingredients, processing aids and packaging materials into one question.
- Form #5 has been simplified and the questions on the decision tree clarified to make it easier to use and understand.

HACCP Plan Form Summary

Form #1:
Product Description

Form #2:
Ingredients and Incoming Materials

Form #3:
Flow Diagram

Form #4:
Plant Schematic

Form #5:
Hazard Description and Critical Control Point Determination

Form #6:
Flow Diagram with Critical Control Points

Form #7:
Uncontrolled Hazards

Form #8:
HACCP Matrix

Form #1: Product Description | Plan Name: _____

Product name	Product type: (e.g. cooked, raw, processed, ready to eat)	Product characteristics: (e.g. pH, A_w, salinity, state, other qualities)	Finished product and recipe meets the requirements of *Food and Drugs Act* (Y/N)?	Label meets requirements of *Consumer Packaging and Labelling Act* and Regulations (Y/N)?	Product contains restricted ingredients as per *Food and Drugs Act* (Y/N)? If yes, list restricted ingredients.	Product contains allergens as per Health Canada Guidelines (Y/N)? If yes, list allergens.	Shelf-life of product	Storage instructions (e.g. keep fresh, keep frozen, humidity control, ready to cook)	Intended use of the product: include special delivery instructions, special consumer groups (e.g. elderly, immuno compromised)

Form #2: Ingredients and Incoming Materials

Plan Name: _____

Identify potential biological, chemical or physical hazards associated with each. Answer each question and fill in the boxes with –B— if a biological hazard exists, –C— if a chemical hazard exists and –P— if a physical hazard exists.

List all incoming raw materials/ processing aids/packaging materials and ingredients by product name.	Is a potential biological hazard associated with the item (e.g. bacteria, parasites)?	Is a potential chemical hazard associated with the item (e.g. antibiotic residues, pesticide residues, allergenic concerns)?	Is a potential physical hazard associated with the item? Address both metallic and non-metallic (e.g. environmental concerns – stones, dirt; foreign material – needles, bones).

Form #3: Flow Diagram | Plan Name: _____

PROCESS FLOW DIAGRAM

- Construct a flow diagram of the manufacturing process.
- Number each step in the process and identify if potential biological, chemical or physical hazards are associated with each step in the process.
    - Is a potential biological hazard associated with the step (e.g. bacterial contamination, bacteria on surfaces, bacterial growth)?
    - Is a potential chemical hazard associated with the step (e.g. sanitation residues, chemical contamination)?
    - Is a potential physical hazard associated with the step (e.g. flaking paint, metal on metal contact)?

Form #4: Plant Schematic | Plan Name: _____

PLANT SCHEMATIC

- Conduct a plant schematic or floor plan of the facility, identifying all equipment and rooms.
- Indicate on the floor plan the flow of product and people through the facility.
- On the floor plan, identify all potential cross-contamination points, whether biological, chemical or physical. Some examples include:
  - raw and cooked crossover
  - allergen products versus non-allergens
  - inedible materials and finished product crossover
  - crossover of personnel from incompatible areas

Form # 6: Flow Diagram with Critical Control Points

Plan Name: _____

PROCESS FLOW DIAGRAM WITH CRITICAL CONTROL POINTS IDENTIFIED

- Using Form #3, identify beside the appropriate steps where the critical control points for the HACCP Plan have been identified.

Form #7: Uncontrolled Hazards | Plan Name: _____

UNCONTROLLED HAZARDS

- Summarize all *biological, chemical* and *physical* hazards in your facility as identified by a 'NO' answer in Q1 on Form #5.
- Indicate how each hazard will be controlled before or after the process:
  - cooking instructions
  - public education
  - use before date

Hazards	How the hazard could be addressed

Form #5: Hazard Description and Critical Control Point Determination

Plan Name: _____

Incoming Materials:

INCOMING MATERIAL/ PROCESS STEP List all incoming materials, all process steps, all processing aids and all potential points of cross-contamination as identified in Form #2, Form #3 and Form #4.	LIST ALL BIOLOGICAL, CHEMICAL & PHYSICAL HAZARDS RELATED TO INGREDIENTS, INCOMING MATERIALS, PROCESSING, PRODUCT FLOW ETC. Determine if each hazard that has been identified is controlled by prerequisite program(s). *If yes, indicate "prerequisite program" and which section of the prerequisite programs control the hazard. Proceed to next identified hazard. *If no, go to question (Q1).	Q1. Could a control measure(s) be used at any process step? * If no, not CCP, enter "NO" on this form and proceed to the next identified hazard. *If yes, describe the control measure and go to question (Q2).	Q2. Is it likely that contamination with the identified hazard could occur in excess of the acceptable level or could increase to an unacceptable level? *If no, not CCP. Proceed to the next identified hazard. *If yes, go to question (Q3).	Q3. Is this control measure specifically designed to eliminate or reduce the likely occurrence of the identified hazard to an acceptable level? *If no, go to question (Q4). *If yes, CCP. Go to last column.	Q4. Will a subsequent step eliminate the identified hazard or reduce its likely occurrence to an acceptable level? *If no, CCP. Go to last column. *If yes, not a CCP. Identify subsequent step and proceed to the next identified hazard.	CCP number *Proceed to next identified hazard.
	Biological Chemical Physical					
	Biological Chemical Physical					
	Biological Chemical Physical					

Form #5: Hazard Description and Critical Control Point Determination

Plan Name: _____

INCOMING MATERIAL/ PROCESS STEP List all incoming materials, all process steps, all processing aids and all potential points of cross-contamination as identified in Form #2, Form #3 and Form #4.	LIST ALL BIOLOGICAL, CHEMICAL & PHYSICAL HAZARDS RELATED TO INGREDIENTS, INCOMING MATERIALS, PROCESSING, PRODUCT FLOW ETC. Determine if each hazard that has been identified is fully controlled by prerequisite program(s). *If yes, indicate "prerequisite program" and which section of the prerequisite programs control the hazard. Proceed to next identified hazard. *If no, go to question (Q1).	Q1. Could a control measure(s) be used at any process step? * If no, not CCP, enter "NO" on this form and proceed to the next identified hazard. *If yes, describe the control measure and go to question (Q2).	Q2. Is it likely that contamination with the identified hazard could occur in excess of the acceptable level or could increase to an unacceptable level? *If no, not CCP. Proceed to the next identified hazard. *If yes, go to question (Q3).	Q3. Is this control measure specifically designed to eliminate or reduce the likely occurrence of the identified hazard to an acceptable level? *If no, go to question (Q4). *If yes, CCP. Go to last column.	Q4. Will a subsequent step eliminate the identified hazard or reduce its likely occurrence to an acceptable level? *If no, CCP. Go to last column. *If yes, not a CCP. Identify subsequent step and proceed to the next identified hazard.	CCP number *Proceed to next identified hazard.
Process Steps:						
	Biological Chemical Physical					
	Biological Chemical Physical					
	Biological Chemical Physical					

Form #5: Hazard Description and Critical Control Point Determination

Plan Name: _____

INCOMING MATERIAL/ PROCESS STEP List all incoming materials, all process steps, all processing aids and all potential points of cross-contamination as identified in Form #2, Form #3 and Form #4.	LIST ALL BIOLOGICAL, CHEMICAL & PHYSICAL HAZARDS RELATED TO INGREDIENTS, INCOMING MATERIALS, PROCESSING, PRODUCT FLOW ETC. Determine if each hazard that has been identified is fully controlled by prerequisite program(s). *If yes, indicate "prerequisite program" and which section of the prerequisite programs control the hazard. Proceed to next identified hazard. *If no, go to question (Q1).	Q1. Could a control measure(s) be used at any process step? * If no, not CCP, enter "NO" on this form and proceed to the next identified hazard. *If yes, describe the control measure and go to question (Q2).	Q2. Is it likely that contamination with the identified hazard could occur in excess of the acceptable level or could increase to an unacceptable level? *If no, not CCP. Proceed to the next identified hazard. *If yes, go to question (Q3).	Q3. Is this control measure specifically designed to eliminate or reduce the likely occurrence of the identified hazard to an acceptable level? *If no, go to question (Q4). *If yes, CCP. Go to last column.	Q4. Will a subsequent step eliminate the identified hazard or reduce its likely occurrence to an acceptable level? *If no, CCP. Go to last column. *If yes, not a CCP. Identify subsequent step and proceed to the next identified hazard.	CCP number *Proceed to next identified hazard.
	Biological Chemical Physical					
	Biological Chemical Physical					
	Biological Chemical Physical					

Plant Schematic Diagram:

Form #8: HACCP Matrix | Plan Name: _____

Process Step Number as indicated on Form #3.	**CCP Hazard Number** Number sequentially.	**Hazard Description** Identify whether the hazard is biological, chemical or physical. Describe hazard.	**Critical Limits** Define the value(s) that are acceptable to maintain the CCP under control.	**Monitoring Procedures** Identify the following: • who is responsible for the task; • what procedure is to be followed; • what observation is to be made or what measurement is to be taken; • how often the task is to be performed; • where the observations are to be recorded.	**Deviation Procedures and Corrective Actions** If monitoring indicates a deviation, describe: • who takes the corrective actions; • what procedures are to be followed; • where the actions are to be recorded.	**Verification Procedures** Identify the following: • who is responsible for the task; • what procedure is to be followed; • what observation is to be made or what measurement is to be taken; • how often the task is to be performed; • where the observations are to be recorded. If verification indicates a deviation, describe: • who takes the corrective actions; • what procedures are to be followed; • where the actions are to be recorded.	**HACCP Records** List records to be used.

HACCP Advantage Plus+

93 *HACCP Advantage Plus+* Introduction

94 TABLE 2 *HACCP Advantage Plus+* Standards Summary Chart

CONTROL PROGRAMS *Plus+*

97 P10.1 Traceability Program

98 P11.1 Security Program

TRAINING *Plus+*

99 T10.1 Traceability Training

100 T11.1 Security Training

OPERATIONAL CONTROLS *Plus+*

101 O10.1 Incoming Materials

102 O10.2 In-Process and Outgoing Materials

103 O11.1 Employee Identification and Personnel Control

104 O11.2 Access to Sensitive Areas

105 O11.3 Control of Incoming and Outgoing Shipments

106 O11.4 Inventory Control

107 O11.5 Security Inspections

ENVIRONMENTAL CONTROLS *Plus+*

108 E11.1 Facility Security

Welcome to the *HACCP Advantage Plus+*

HACCP Advantage Plus+ is the third step in the *HACCP Advantage* series of programs. As outlined in the Introduction to this manual, *HACCP Advantage Plus+* includes all the requirements of the *GMP Advantage* component and the *HACCP Advantage* component.

This section of the manual includes 12 new *HACCP Advantage Plus+* standards: four standards relating to traceability and eight standards relating to security.

Traceability and security of the food supply are becoming important issues in the food processing industry. The traceability standards enables *HACCP Advantage Plus+* users to trace ingredients and finished products back to the immediate supplier and forward to the next customer. This ability to trace food products "one up and one down" is essential to protect consumers should a food safety crisis occur.

Security of a food processing facility is also very important. Deliberate tampering or adulteration of food can have devastating and long-lasting effects not only on the health of consumers but also on the image of the company that produced the implicated food product. Ensuring a secure food processing environment is the best defense against this type of problem.

Both groups of standards follow the same organizational design as the GMP standards. The numbering format takes up where the numbering of the GMP standards leaves off.

As with the other standards, you must achieve the stated outcome, implement monitoring procedures and specify corrective actions and documentation requirements for each standard. When monitoring any traceability or security standard, record your observations as well as any corrective actions taken to ensure that the standard is met. Documentation should identify all records that will be generated as a result of monitoring actions.

A specialized consultant may be able to provide you with more specific guidance to help with the implementation of the *HACCP Advantage Plus+* component.

TABLE 2 | *HACCP Advantage Plus+* Standards Summary Chart

CONTROL PROGRAMS	TRAINING
P10 Traceability	**T10 Traceability**
P10.1 Traceability Program	T10.1 Traceability Training
P11 Security	**T11 Security**
P11.1 Security Program	T11.1 Security Training

TABLE 2 | *HACCP Advantage Plus+* Standards Summary Chart

OPERATIONAL CONTROLS	ENVIRONMENTAL CONTROLS
010 Traceability	
010.1 Incoming Materials Traceability Information	
010.2 In-Process and Outgoing Materials Traceability Information	
011 Security	**E11 Security**
011.1 Employee Identification and Personnel Control	E11.1 Facility Security
011.2 Access to Sensitive Areas	
011.3 Control of Incoming and Outgoing Shipments	
011.4 Inventory Control	
011.5 Security Inspections	

What is the standard?

A written Traceability Program is developed and updated as required. The program describes the roles, responsibilities and instructions that apply to the appropriate gathering, storage and communication of traceability information. Traceability information includes supplier and customer information and the identification of products, components or ingredients (including packaging) that may have an impact on food safety. The traceability program allows finished products to be traced back to their raw materials/ingredients or forward to the customer. Traceability data is recorded internally by trading partners and shared with trading partners when necessary.

What are the risks?

A sound traceability program can reduce the scope and nature of contamination and potential hazards in the food supply chain and protect human and animal health. Collecting and maintaining traceability information will enhance identification and verification of the origin and processing path of a product or input. Lack of a traceability system and/or personnel who do not perform the traceability practices can prevent or delay identification of a hazard and/or increase the breadth of a hazard's impact.

How can you meet the standard?

- Develop a written traceability program that sets out policies, procedures and controls for gathering, storing and communicating key information about suppliers, customers, and products.
- Develop the traceability program to:
  - link all raw ingredients to their suppliers;
  - link all raw ingredient lot codes to finished product codes;
  - code finished products individually or by lot;
  - link ingredients in reworked product to finished product codes if the facility uses rework;
  - link ingredients in premixes to finished product codes if the facility uses premixed ingredients;
  - link finished product codes to the the organizations that receive the products through distribution records; and
  - identify and track the time and movement of products through the facility from receiving to shipping to shipping to receipt by customers.
- Develop a system to securely capture, store and communicate the required information at all key points in the process including shipping, receiving, handling and storage.
- Merge the traceability program with the written recall program as recall procedures require traceability information.
- Integrate the traceability program with your shipping, receiving, handling and storage programs where applicable.
- Record key supplier, transporter and customer information including the name of the firm, name of the contact person, address, telephone number, fax number and e-mail address.
- Maintain a comprehensive inventory system for all ingredients, packaging, and finished products.
- Record key product information:
  - products, components (including packaging) and ingredients need to be identified at a specified level, whether it be individual unit or lot, batch etc.;
  - type of product received, including brand name and specific variety;
  - date received;
  - quantity and type of packaging (e.g. 12 oz. bottles); and
  - record of movement and use of products, components or ingredients through the plant/processing environment to ensure that finished products can be traced back to their component parts (i.e. raw material and ingredients).

Which regulations apply to this standard?

Meat & Poultry:
N/A

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, review the written traceability program to ensure it is complete, accurate and current in regards to the facility's needs.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

What is the standard?

A written Security Program is developed and updated as required. The program outlines effective security policies and procedures to protect food, ingredients and packaging from tampering, theft, adulteration and intentional contamination. At a minimum, the program outlines a security plan that includes procedures and policies for handling threats, deliberate product adulteration, control and/or disposal of potentially dangerous materials, facility security inspection, facility evacuation and acceptable materials and items allowed within the facility. The security plan provides contact information and direction for the notification of appropriate government authorities in the event of a security crisis.

What are the risks?

Intentional tampering or adulteration of food can lead to widespread food-borne illness, product recalls and economic loss. Developing a system that prevents and/or manages this risk as well as prepares the facility in the event of deliberate tampering or adulteration can significantly decrease or eliminate any potential damage to the company and prevent potentially injurious products from entering the food chain.

How can you meet the standard?

- Develop a written security program describing establishment policies, procedures and controls regarding:
  - handling of threats, tampering, or product adulteration:
    - personnel advise management when these events occur
    - potentially implicated product is identified, located and secured
    - procedures outline measures to verify product safety before release
  - control or disposal of potentially dangerous materials:
    - potentially dangerous materials (reagents, bacterial cultures, etc.) are properly controlled to prevent food contamination
    - dangerous materials or implicated product disposal procedures are clearly outlined
  - facility security inspection:
    - procedures are outlined to verify the structural and physical security of the facility at a pre-determined frequency
    - facility security inspections include examination of building, roofs, parking lots and surrounding areas for evidence of tampering or adulteration
  - facility evacuation:
    - procedures are developed that when followed will facilitate an organized, efficient, safe and rapid evacuation of all personnel, visitors and contractors from the facility
  - acceptable materials list:
    - a list of materials that employees, visitors and contractors are allowed to bring into the facility is developed, posted and enforced
  - government authority notification:
    - procedures are documented to notify the appropriate government authority in the event of deliberate product tampering or adulteration, product theft, or threats
    - a list of current government and law authority contact information is maintained
- Form a security team and assign responsibilities within the security plan to individual team members.
- Delegate a lead team member as the security coordinator.
- Develop a relationship with a testing laboratory for possible assistance in the investigation of tampering or adulteration cases.

Which regulations apply to this standard?

Meat & Poultry:
N/A

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, review the written Security Program to ensure that it is current and appropriate for the establishment's operations.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

What is the standard?

Traceability training is delivered and updated as required to ensure that personnel understand and are competent in the policies and procedures necessary to ensure that food products are traceable from supplier inputs/raw material, through to the finished product destination. Training is delivered at an adequate frequency to ensure personnel understanding remains current.

What are the risks?

Establishment personnel play a major role in ensuring food traceability. Personnel who do not understand, or do not follow, established food traceability policies place the integrity of the food traceability system at risk, and thereby can prevent or delay the identification of a hazard and/or increase the breadth of a hazard's impact. Training increases awareness, understanding and competence in food traceability, which minimizes these risks.

How can you meet the standard?

- Train designated personnel, including all shipping, receiving, handling and storage personnel, on the concepts and policies of an effective food traceability system, including all elements of the written program developed in response to P10.1.
- Ensure that designated personnel understand the importance of using the correct identification codes at all points in the processing of products.
- Routinely review and update training to ensure material is appropriate and current.
- Deliver training to designated personnel at the start of employment and refresher training at appropriate intervals.
- Note the date, type of training, name of trainer and name of participant(s) in a permanent record upon completion of traceability training.

Which regulations apply to this standard?

Meat & Poultry:
N/A

Dairy:
N/A

Other:
N/A

Are you in conformance?

At predetermined intervals review the traceability training to ensure it is complete, accurate and effective in regards to the facility's traceability needs.

At predetermined intervals, review personnel training records for conformance, completeness and accuracy.

Record your observations to prove that monitoring tasks were completed. Initial and date the record.

What is the standard?

Security Training is delivered and updated as required to ensure that personnel understand and are competent in the policies and procedures necessary to protect the security of food, the processing facility and all personnel within. Training is delivered at an adequate frequency to ensure personnel understanding remains current.

What are the risks?

Intentional tampering or adulteration of food could lead to widespread food-borne illness, product recalls and economic loss. Training of facility personnel in security increases awareness of the potential for product tampering and adulteration. Training is also important to ensure personnel understand their responsibilities in reporting potential security breaches.

How can you meet the standard?

- Train all personnel at employee orientation and at a pre-determined frequency on the concepts and policies of the security program including applicable employee-dependent elements of the written program developed in response to the written Security Program (P11.1).
- Require employees to report any sign of possible product tampering, adulteration or theft as part of the training.
- Train members of the security team on all elements and provisions of the food security plan.
- Train mail handlers on the recognition and handling of suspicious mail.
- Routinely review and update training to ensure it is appropriate and current.
- Upon completion of personnel training, note the date, type of training, name of trainer and name of participant(s) in a permanent record.

Which regulations apply to this standard?

Meat & Poultry:
N/A

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, review the Security Training to ensure that it is current and appropriate for the establishment's operations. At pre-determined intervals, review personnel training records for conformance, completeness and accuracy.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

What is the standard?

Traceability information for all incoming food, ingredients, packaging materials and returned products, is recorded accurately and efficiently whenever products or materials are received into the facility as described in the written Traceability Program (P10.1). Incoming food, ingredients and packaging materials, and their point of origin, are adequately identified when entering the facility.

What are the risks?

Systematically recording traceability information when receiving food, ingredients and packaging materials is essential to developing a traceability system and to maintaining the system's integrity. Inadequate identification on incoming food, ingredients and packaging materials or inconsistent recording of traceability information undermines the integrity of the food traceability system, which can delay the identification of hazardous materials and/or increase the breadth of a hazard's impact in the case of an incident.

How can you meet the standard?

- Ensure that all key supplier information as outlined in the written Traceability Program (P10.1) is recorded for all incoming materials.
- Ensure there is a system in place that captures and records identification information for all incoming food, ingredients, packaging materials and returned products and that the system is accessible and used at the point of receiving.
- Identify the immediate transporter who delivered the materials, if different than the supplier as outlined in the written Traceability Program (P10.1).
- Ensure all reasons for returned products are recorded.
- Ensure all food, ingredients, packaging materials and returned products have adequate identification at the specified level, whether it be individual unit, lot or batch. If no such specified level exists for the incoming product, specify a new traceability identifier and link it to the shipment records at the point of receiving.

Which regulations apply to this standard?

Meat & Poultry:
N/A

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, observe the receipt of incoming food, ingredients, packaging materials and returned products. Verify that all required traceability information is available and correctly recorded. Verify that all incoming ingredients are adequately labelled with respect to the traceability program. Ensure that only trained receiving personnel record traceability information.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

O10 Traceability

O10.2 In-Process and Outgoing Materials

What is the standard?

Traceability information for all food, ingredients and packaging materials is recorded accurately and efficiently whenever products or materials undergo a change in form during processing or are shipped from the facility as described in the written Traceability Program (P10.1). Contents of conveyance vehicles and containers are labelled correctly and traceability information recorded when products are shipped. Information regarding the destination of shipped products is captured and recorded.

What are the risks?

Systematically recording traceability information when processing and shipping food, ingredients and packaging materials is essential to developing a traceability system and to maintaining the system's integrity. Inadequate identification on in-process and outgoing food, ingredients and packaging materials or inconsistent recording of traceability information undermines the integrity of the food traceability system, which can delay the identification of hazardous materials and/or increase the breadth of a hazard's impact in the case of an incident.

How can you meet the standard?

- Ensure there is a system in place that identifies and records product traceability information and movement, and use the system for all food, ingredients and packaging materials.
- Record the traceability information every time a product or container of products is transported to a new location or processing station or when a product undergoes a change in form at a particular processing station (e.g. combining of ingredients, addition of packaging).
- Ensure that all key customer information as outlined in the written Traceability Program (P10.1) is recorded for all outgoing materials and products.
- Ensure that the unique codes that identify products being shipped out of the facility meet the traceability needs of customers and supply chain partners.
- Identify the immediate transporter who received the shipment, if different than the customer as outlined in the written Traceability Program (P10.1).

Which regulations apply to this standard?

Meat & Poultry:
N/A

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, observe the processing and shipping of food, ingredients and packaging materials. Verify that all required traceability information is available and correctly recorded whenever food, ingredients or packaging materials undergo a form change or are shipped. Ensure that only trained personnel record traceability information.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

O11 Security

O11.1 Employee Identification and Personnel Control

What is the standard?

A positive identification system for facility employees is developed, implemented and required for all employees prior to entrance into the facility. The system includes an up-to-date list of facility employees, their work area, and their normal working hours. New employees undergo a background check to verify their identification prior to commencing employment. Ensure that any personnel entering the facility that are not employees (e.g. visitors, contractors, auditors) are restricted to non-product areas unless accompanied by a facility representative authorized by the security team.

What are the risks?

Intentional tampering or adulteration of food could lead to widespread food-borne illness, product recalls and economic loss. Ensuring that people that intend to tamper with or adulterate food do not enter the facility is the first and best line of defense against this threat. Positive identification of all facility employees, visitors, contractors and all personnel entering the facility will help prevent unauthorized access.

How can you meet the standard?

- Develop an identification system that clearly and uniquely identifies all facility employees (e.g. picture ID cards, sign-in/sign-out).
- Use the developed identification system at all employee entrances to ensure only authorized employees and cleared visitors gain entry into the facility.
- Ensure that an up-to-date employee list that includes assigned work areas and hours is available at entrances and to facility management.
- Maintain controlled entry of personnel (employees and visitors) both during working and non-working hours.
- Use an identification system that clearly identifies employees to their specific work function or area (e.g. colored workwear, coloured/numbered card).
- Ensure that all new hires receive a thorough background check prior to employment to verify their identity and identify any potential employee risk.
- Ensure that personnel entering the facility that are not named on the employee list or have not been positively identified are restricted to non-product areas or are accompanied by an authorized employee familiar with the facility and the security plan.

Which regulations apply to this standard?

Meat & Poultry:
N/A

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, review the employee positive identification system as well as the employee list to ensure that it is current and appropriate for the establishment's operations. Review recent hires, to ensure a proper background check was completed.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

O11 Security | O11.2 Access to Sensitive Areas

What is the standard?

Access to critical or sensitive areas of the facility such as laboratories, chemical and hazardous materials storage areas, interior and exterior food storage areas, wells, water and ice processing equipment, and central controls for airflow, water systems, electricity and gas is restricted and controlled. Restricted areas within the facility are secured and clearly marked with appropriate signage.

What are the risks?

Tampering or damage in sensitive areas of food processing facilities can have a critical impact on the safety and suitability of food, ingredients and packaging materials. Sensitive areas such as laboratories, chemical and hazardous materials storage areas, interior and exterior food storage areas, wells, water and ice processing equipment, and central controls for airflow, water systems, electricity and gas are susceptible to sabotage that can compromise the safety and suitability of food, ingredients and packaging materials. For example, tampering with water treatment systems can result in unsafe finished products. Restricting access of sensitive areas to only authorized personnel will prevent deliberate tampering and/or unintentional disruptions.

How can you meet the standard?

- Ensure that access to sensitive or critical areas/equipment is controlled or restricted by use of locking mechanisms or other entry prevention measure.
- Areas to ensure are controlled or secured include:
  - laboratories
  - food, ingredient, chemical, and hazardous materials storage areas
  - controls for air flow, water systems, electricity and gas supply
  - exterior trailers, food storage areas, tanks, and silos.
- Clearly mark all restricted areas with legible signage.
- Allow only authorized employees or contractors to enter critical or sensitive areas.
- Restrict access to production and food storage areas only to employees or visitors accompanied by authorized employees.

Which regulations apply to this standard?

Meat & Poultry:
N/A

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, confirm that access to critical or sensitive areas within the facility is restricted. Confirm that adequate signage is present at restricted areas and that locking mechanisms are functioning properly. Confirm that only authorized employees or visitors accompanied by authorized employees are within food processing or storage areas.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

O11 Security | O11.3 Control of Incoming and Outgoing Shipments

What is the standard?

The integrity of incoming and outgoing food, ingredients, packaging materials, returned products and all other deliveries is inspected for evidence of tampering, adulteration, or foreign materials. Incoming shipments are verified against purchase orders or other incoming shipment documentation.

What are the risks?

Intentional tampering or adulteration of food could lead to widespread food-borne illness, product recalls and economic loss. Without inspection, unsafe, tampered or adulterated product may enter the food chain. Incorporating and utilizing an inspection procedure at the point where food, ingredients and packaging materials enter the facility as well as where finished products leave the facility can mitigate these security risks.

How can you meet the standard?

- Ensure all incoming ingredients, food, packaging materials, construction materials, chemicals, returned product and all other deliveries are inspected for any evidence of tampering, adulteration, theft or other questionable activities.
- Request, where possible, that incoming shipments from food and materials suppliers are sealed with tamper-proof, numbered seals or tags that can be verified for accuracy.
- Apply a tamper-proof seal or tag to all outgoing food shipments.
- Ensure that receiving personnel are notified of all incoming shipments prior to their arrival. Written notifications can be used to verify the contents and accuracy of each incoming shipment.
- Ensure that any shipment that arrives without notification is properly verified and inspected prior to unloading into the facility.
- Ensure that shipping/receiving employees investigate suspicious shipping records (e.g. strange alterations, additions, deletions, faked records).
- Consider, where appropriate, suppliers' food security programs when selecting suppliers of all food, ingredients, packaging materials, chemicals, and all other materials.

Which regulations apply to this standard?

Meat & Poultry:
N/A

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, confirm that incoming ingredients, food, packaging materials, chemicals and all other materials are inspected for evidence of tampering, adulteration, theft or other suspicious activities. Confirm that all incoming shipments are verified against a roster of planned shipments for accuracy.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

What is the standard?

Inventory within the facility is strictly controlled and tracked for ingredients, packaging materials, processing aids, finished products and all hazardous materials. Inventory is organized in a manner that allows timely identification, segregation and security of all products involved in the event of product tampering or adulteration. An accurate inventory is maintained continually through usage recording, inspection and verification to allow the detection of unexplained additions or withdrawals from existing stock.

What are the risks?

Intentional tampering or adulteration of food could lead to widespread food-borne illness, product recalls and economic loss. Unexplained (or unnoticed) additions or removals of inventory present risks of fraudulent activity or intentional tampering, even where the remaining inventory appears acceptable. Maintaining an inventory control system will detect missing items or suspicious additions that are not accounted for during receiving, handling and shipping. Identifying and separating suspect inventory items is important in maintaining security.

How can you meet the standard?

- Organize all inventory, including all ingredients, packaging materials and finished products, so that any product or material implicated or involved in suspected tampering, adulteration, or contamination can be quickly identified and segregated.
- Ensure that employees record all incoming materials so that they can be added to the inventory.
- Ensure that employees record all usage of ingredients, processing aids and packaging materials so that they can be subtracted from the inventory and compared against projected usage.
- At a pre-determined frequency, perform a physical count of all products within the facility and compare to inventory records. Separate any products with discrepancies and initiate corrective actions.
- Conduct a daily inventory of hazardous chemicals or related items so that discrepancies can be identified quickly.

Which regulations apply to this standard?

Meat & Poultry:
N/A

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, confirm that all inventory is present and accounted for and that all inventory documents are current. Confirm inventory inspections and verifications are proceeding at the documented frequencies.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

What is the standard?

The facility perimeter and all points where intentional damage to equipment or the facility would result in a food safety or security hazard are monitored for signs of activity or unauthorized entry at a pre-determined frequency.

What are the risks?

Intentional tampering or adulteration of food could lead to widespread food-borne illness, product recalls and economic loss. An unprotected facility is susceptible to the entry of persons intending to tamper or adulterate food. Maintaining a secure, frequently inspected facility perimeter will deter unwanted or dangerous persons from trespassing onto facility property or into the facility itself.

How can you meet the standard?

- Perform security inspections of sensitive equipment and all storage facilities, including any temporary storage vehicles, for any signs of tampering, theft or abuse.
- Monitor the integrity of the plant perimeter for signs of suspicious activity or unauthorized entry.
- Inspect potable and non-potable water lines in food processing areas periodically for possible tampering.
- Inspect all central controls for ventilation, gas, electricity, and water control/heating for signs of possible tampering.
- Ensure that all cameras, locks, and other security measures are functioning as intended at a pre-determined frequency.
- Consider putting in place procedures to monitor the operation of sensitive pieces of equipment to prevent product or equipment tampering.

Which regulations apply to this standard?

Meat & Poultry:
N/A

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, confirm that the monitoring of the facility perimeter, all access points into the facility, all utility central controls, potable and non-potable water lines and any other planned security inspections are being performed correctly by trained personnel at the pre-determined frequency.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

What is the standard?

The facility is adequately secured and provides effective means to discourage unauthorized entry onto facility property. All access points into the facility are secured by guards, alarms, cameras or other security measures.

What are the risks?

Intentional tampering or adulteration of food could lead to widespread food-borne illness, product recalls and economic loss. An unprotected facility is susceptible to the entry of persons intending to tamper or adulterate food. Maintaining a secure facility perimeter with appropriate control measures will prevent unwanted persons from trespassing onto facility property or into the facility itself.

How can you meet the standard?

- All access points into the facility are secured by security equipment such as alarms, cameras, or locks to prevent or monitor access point use.
- Plant boundaries are clearly marked and preferably fenced to prevent unauthorized entry. "No Trespassing" signs should be posted.
- Outside lighting is sufficient to allow detection of unusual activities as well as provide adequate lighting for employee use.
- Doors, windows, roof openings, vent openings, trailer bodies, railcars, and bulk storage tanks are secured at all times (e.g. locks, sensors).
- Loading docks are secured to avoid unverified or unauthorized entry.
- Emergency exits are alarmed and have self-locking doors that can only be opened from the inside.

Which regulations apply to this standard?

Meat & Poultry:
N/A

Dairy:
N/A

Other:
N/A

Are you in conformance?

At pre-determined intervals, confirm that the facility is properly secured. Confirm that the facility boundary is well-marked and has been monitored for signs of unauthorized entry. Confirm that all facility access points are secured effectively.

Record your observations to prove that the monitoring tasks were completed. Initial and date the record.

Glossary

Glossary

adulteration: the corruption of foods by adding inferior, toxic or other materials or ingredients.

allergens: substances that cause some individuals to experience an immune system response (i.e. an allergic reaction).

anaphylaxis: a severe allergic reaction.

approved pesticides: any pesticide regulated under the *Pest Control Products Act* and registered by the Pest Management Regulatory Agency.

biological hazard: any microorganism, or toxin produced by a microorganism, that can cause foodborne illness when ingested.

Canadian Food Inspection Agency (CFIA): the federal body responsible for delivery of all federal inspection services related to food, animal health and plant protection.

certificate of analysis: documentation that denotes a qualitative or quantitative property of a food product based on scientific analysis.

chemical hazard: any chemical that may be toxic to humans and may cause immediate or long-term effects when ingested or inhaled.

Consumer Packaging and Labelling Act: a federal act that provides for a uniform method of labelling and packaging of consumer goods as well as prevention of fraud and deception by provision of factual label information.

contamination: the presence of hazards in food that can be harmful to humans. Hazards can be biological, chemical, or physical.

control (noun): the state wherein correct procedures are being followed and criteria are being met.

control measure: any action or activity that can be used to prevent or eliminate a food safety hazard or reduce it to an acceptable level.

corrective action: measures taken to regain control of a hazard, determine product disposition and prevent problem reoccurence.

critical control point (CCP): a step or point in a process at which control can be applied and is essential to prevent or eliminate a food safety hazard or reduce it to an acceptable level.

critical limit: the maximum or minimum value to which a biological, chemical or physical parameter must be controlled to prevent, eliminate or reduce the occurrence of a food safety hazard to an acceptable level.

cross-contamination: the physical movement, or transfer, of harmful microorganisms or trace allergens from one person, object or food product to another.

deviation: failure to meet a critical limit.

effectiveness test: a test designed to measure the effectiveness of an established program (e.g. microbiological sampling to measure sanitation program effectiveness).

establishment: any building or facility, including the surrounding area, in which food is processed or handled.

first-in, first-out (FIFO): a method of inventory control that involves the rotation of food products and helps to ensure timely use of perishable food products.

flow diagram: a systematic representation of the sequence of steps or operations used in the production or manufacture of a particular food item.

***Food and Drugs Act*:** a federal act that establishes regulations regarding food, drugs, cosmetics and therapeutic devices.

food safety: assurance that food will not cause harm to the consumer when it is prepared and/or eaten according to its intended use. (Codex)

Glossary

***Food Safety and Quality Act, 2001*:** a provincial act that establishes regulations designed to minimize food safety risks.

food suitability: assurance that food is acceptable for human consumption according to its intended use. (Codex)

foreign material: any substance or object that does not inherently belong in a food product and may cause injury or illness upon ingestion.

good manufacturing practices (GMPs or Prerequisite Programs): the activities and procedures used to ensure that personnel, the manufacturing environment, and other factors that are not directly related to the food, are monitored and controlled to create conditions that are favourable for the production of safe food products.

HACCP: Hazard Analysis and Critical Control Point – a science-based system that prevents, reduces or eliminates hazards that are significant for food safety.

HACCP plan: the documents, programs and activities prepared in accordance with the principles of HACCP to ensure control of hazards that are significant for food safety.

hazard analysis: the process of collecting and evaluating information on hazards, and conditions leading to their presence, to decide which are significant for food safety and therefore should be addressed in the HACCP plan.

hazard: a biological, chemical or physical agent in, or condition of, food with the potential to cause an adverse health effect.

hygienic drying apparatus: any hand-drying tool or technique that promotes good personal hygiene (e.g. hand dryer, one-use paper towels).

lot: set of units of a product which have been produced, processed or packaged under similar circumstances.

lot code: any unique number or letter designation given to a pre-determined sample size of product (a lot) that identifies that lot.

maintenance chemical/lubricant: any substance (usually liquid or paste) used during activities for the upkeep or repair of equipment (e.g. oil, grease, de-greaser, paint).

monitoring: the act of conducting a planned sequence of observations or measurements of control parameters to assess whether a CCP or specific prerequisite control program is under control.

movement recording: the ability to capture information detailing the transfer of products and/or inputs between premises or between locations within a single facility.

operational separation: refers to the separation of processing activities, by means other than physical separation, to ensure incompatible processing activities do not cause product contamination; commonly a separation in time, following sanitation or through use of some other procedure.

operator: a person operating or engaging in business.

over spray: improper use, or abuse, of sanitation water spray that can cause contamination of food or clean equipment.

packaging materials: any material or object that contains or is intended to contain food products, including labelling materials.

personal welfare area: any area of an establishment that is furnished for use by personnel or visitors and where food processing does not occur.

personnel: refers to any persons who are legitimately present within an establishment including employees, contractors and auditors.

pest: a plant, animal, bird or insect that is hygienically detrimental to a food-processing environment.

pest control device: any device designed and intended to trap, eliminate, limit, prevent or control pests.

physical hazard: any foreign material that could cause injury or illness if ingested.

Glossary

physical separation: refers to the separation of processing activities by physical means to ensure incompatible processing activities do not cause product contamination; commonly a wall or separate processing rooms.

potable water: water that is safe to drink according to applicable potable water regulations.

pre-operational assessment: an overall inspection of a processing area or piece of processing equipment for food safety hazards or issues, that takes place prior to the commencement of food processing activities.

product disposition: the end decision made when determining the outcome of a particular food product, usually associated with held, suspect, or returned food products (e.g. the product disposition for the held meat products was disposal).

recall: a system by which products that may be hazardous to consumers are removed from the marketplace.

record (noun): the result of documenting a specific task or measurement.

Reference Listing of Accepted Construction, Packaging Materials and Non-Food Chemical Agents: a current list of materials and non-food chemicals that have been found by the CFIA to be acceptable for use in establishments operating under the authority of the agency. This publication indicates the acceptability of products intended for use in establishments.

rework: the inclusion of partially- or fully-processed product that has been reconditioned by reprocessing in another product.

sanitation chemical: any chemical agent used for cleaning or sanitizing food contact surfaces or any other surface such as walls, ceilings or equipment.

sanitation manual: a written program manual that outlines the requirements, procedures, frequencies and responsibilities of an establishment's sanitation program.

security: implementation of control measures to prevent intentional product tampering and respond to threats or actual incidents of intentional product tampering.

spoilage: the process of decay in food products.

tampering: making unauthorized alterations or additions to a food product with the intent to cause harm or significantly change the state of the product.

tamper-proof: not readily susceptible to tampering.

traceability: the ability to follow inputs and products, their location and their associated history, use and attributes backwards and forwards throughout the food chain.

validation: the process of obtaining evidence that the elements of the HACCP plan are effective.

verification: the application of methods, procedures, tests and other evaluations, in addition to monitoring, to determine conformance with the HACCP plan.

wash ticket: a record commonly created to denote that a particular piece of equipment or conveyance vehicle has been subjected to appropriate sanitation procedures.

water treatment: the addition of chemicals to water for the purposes of potability or preparation for boiler use.